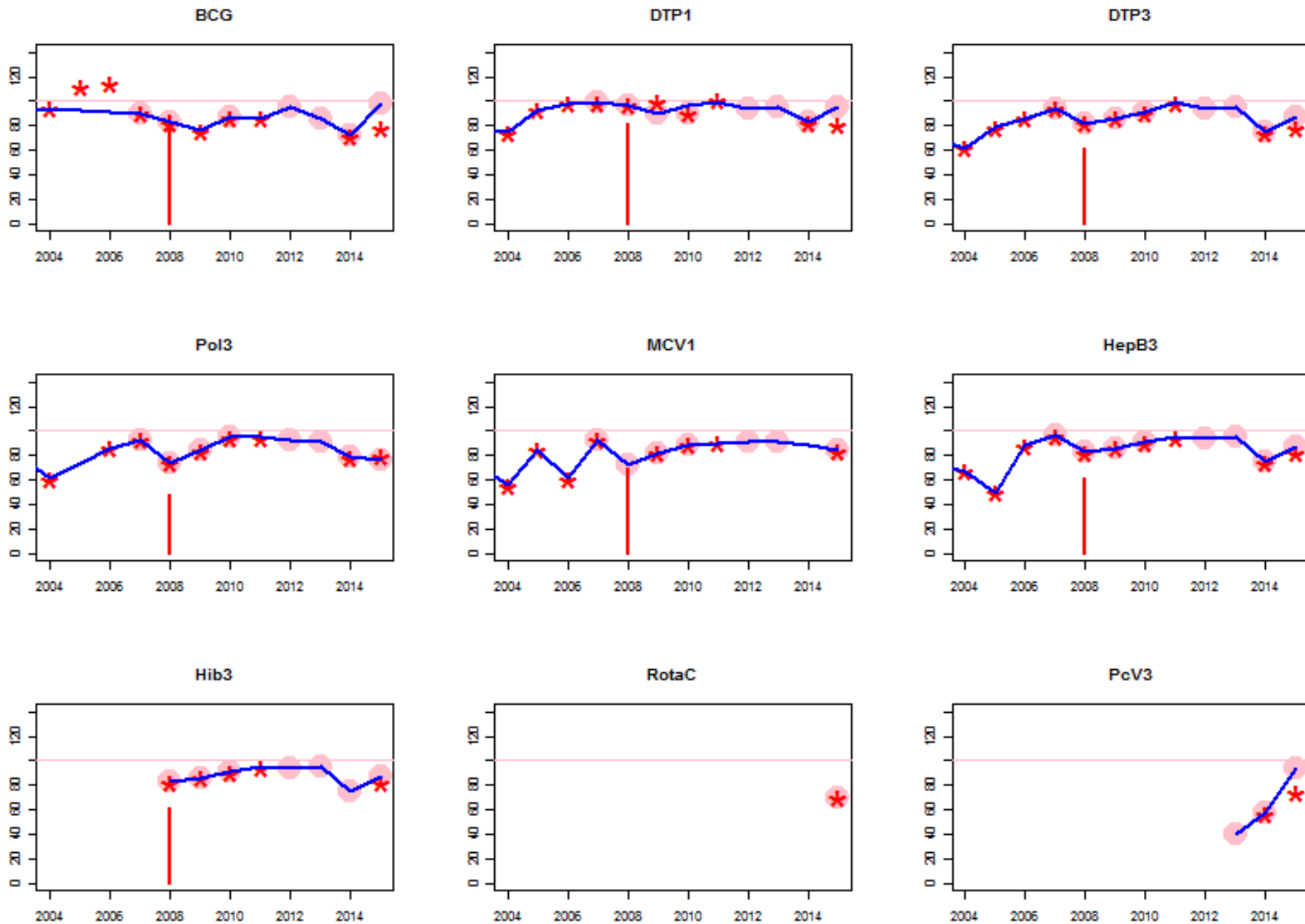
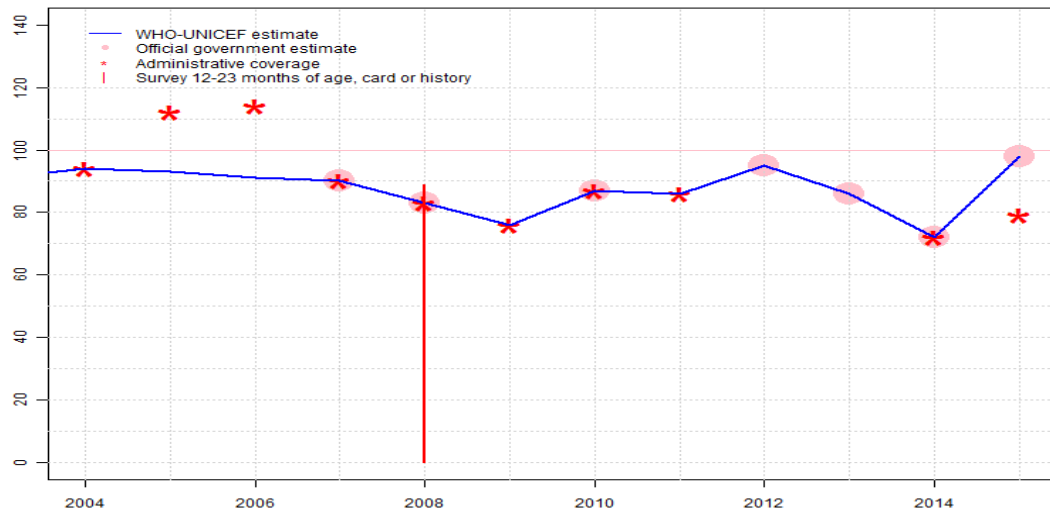


Kiribati: WHO and UNICEF estimates of immunization coverage: 2015 revision



Kiribati - BCG

KIR - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	94	93	91	90	83	76	87	86	95	86	72	98
Estimate GoC	••	••	•	••	••	••	••	••	••	••	••	•
Official	NA	NA	NA	90	83	NA	87	NA	95	86	72	98
Administrative	94	112	114	90	83	76	87	86	NA	NA	72	79
Survey	NA	NA	NA	NA	89	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.

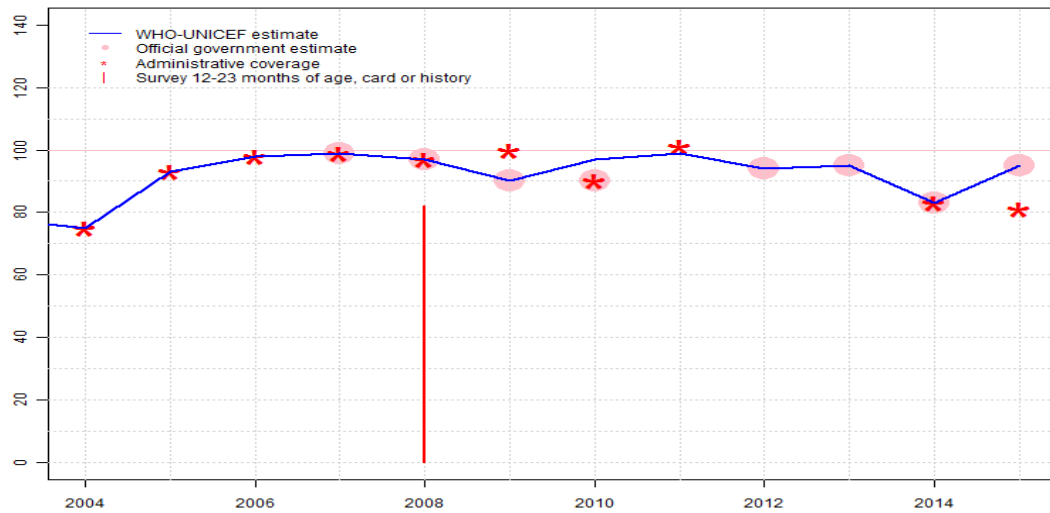
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on reported administrative data. GoC=R+ D+
- 2005: Estimate based on interpolation between data reported by national government. Reported data excluded. 112 percent greater than 100 percent. GoC=D+
- 2006: Estimate based on interpolation between data reported by national government. Reported data excluded. 114 percent greater than 100 percent. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Survey results ignored. Sample size 233 less than 300. Decline in coverage reflects a delay in receipt vaccines supplies and dissemination of vaccines to community-based nurses compounded by confusion related to the introduction of DTP-HepB-Hib vaccine a change in the measles schedule from 9 months to 12 months. GoC=R+ D+
- 2009: Estimate based on reported administrative data. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on reported administrative data. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+
- 2013: Estimate based on coverage reported by national government. GoC=R+
- 2014: Estimate based on coverage reported by national government. Programme reports a two month stock-out at national level. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Programme reports two month national level vaccine stock-out. Fluctuations attributed to small birth cohort and incomplete subnational reporting. Estimate challenged by: D-

Kiribati - DTP1

KIR - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	75	93	98	99	97	90	97	99	94	95	83	95
Estimate GoC	••	••	••	••	••	••	•	•	••	••	••	•
Official	NA	NA	NA	99	97	90	90	NA	94	95	83	95
Administrative	75	93	98	99	97	100	90	101	NA	NA	83	81
Survey	NA	NA	NA	NA	82	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.

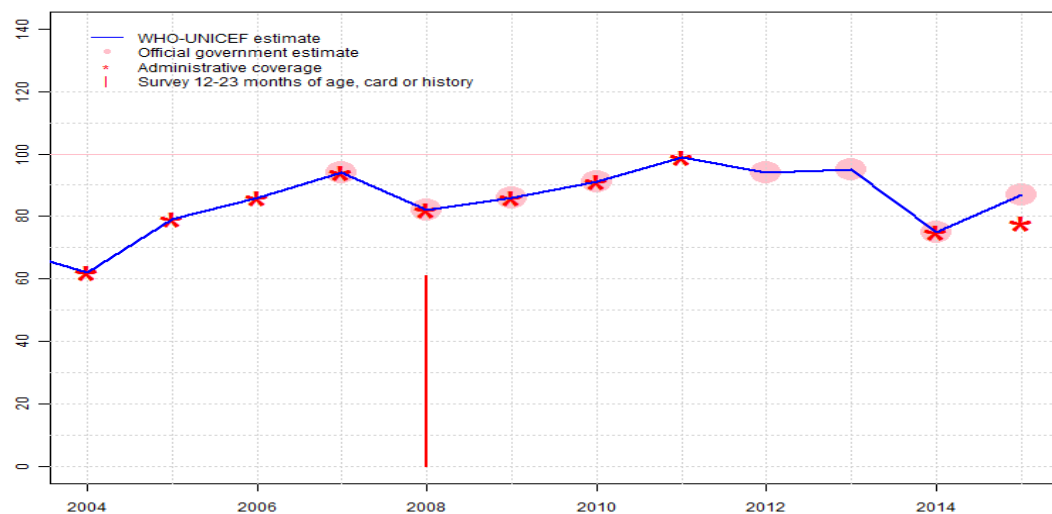
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on reported administrative data. GoC=R+ D+
- 2005: Estimate based on reported administrative data. GoC=R+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Survey results ignored. Sample size 233 less than 300. Decline in coverage reflects a delay in receipt vaccines supplies and dissemination of vaccines to community-based nurses compounded by confusion related to the introduction of DTP-HepB-Hib vaccine a change in the measles schedule from 9 months to 12 months. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: DTP1 coverage estimated based on DTP3 coverage of 91. Estimate challenged by: R-
- 2011: DTP1 coverage estimated based on DTP3 coverage of 99. Reported data excluded. 101 percent greater than 100 percent. Estimate challenged by: D-R-
- 2012: Estimate based on coverage reported by national government. GoC=R+
- 2013: Estimate based on coverage reported by national government. GoC=R+
- 2014: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. Estimate challenged by: D-

Kiribati - DTP3

KIR - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	62	79	86	94	82	86	91	99	94	95	75	87
Estimate GoC	••	••	••	••	••	••	••	••	••	••	••	••
Official	NA	NA	NA	94	82	86	91	NA	94	95	75	87
Administrative	62	79	86	94	82	86	91	99	NA	NA	75	78
Survey	NA	NA	NA	NA	61	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.

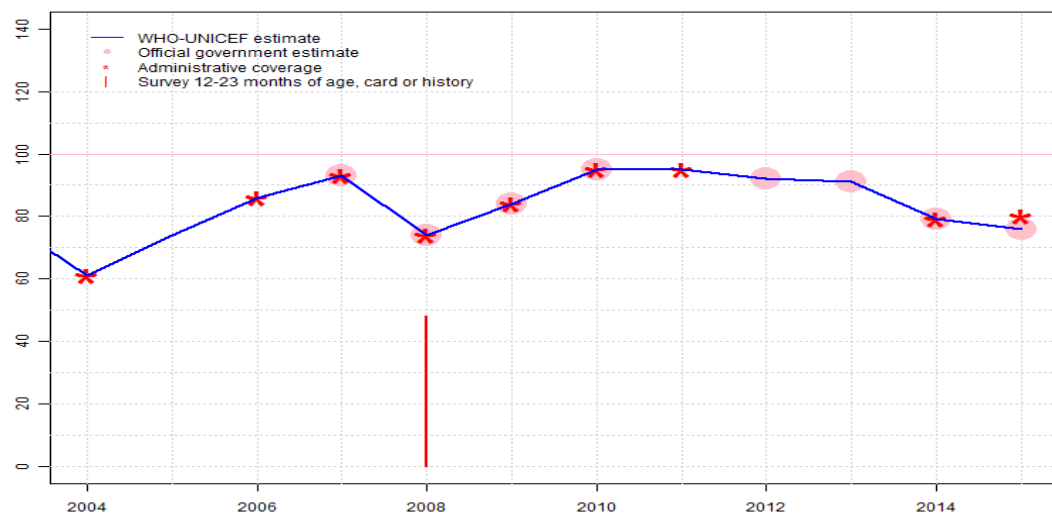
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on reported administrative data. GoC=R+ D+
- 2005: Estimate based on reported administrative data. GoC=R+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Survey results ignored. Sample size 233 less than 300. Kiribati Demographic and Health Survey 2009 card or history results of 61 percent modified for recall bias to 68 percent based on 1st dose card or history coverage of 82 percent, 1st dose card only coverage of 17 percent and 3d dose card only coverage of 14 percent. Decline in coverage reflects a delay in receipt vaccines supplies and dissemination of vaccines to community-based nurses compounded by confusion related to the introduction of DTP-HepB-Hib vaccine a change in the measles schedule from 9 months to 12 months. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on reported administrative data. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+
- 2013: Estimate based on coverage reported by national government. GoC=R+
- 2014: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+

Kiribati - Pol3

KIR - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	61	74	86	93	74	84	95	95	92	91	79	76
Estimate GoC	••	•	••	••	••	••	•	••	••	••	••	••
Official	NA	NA	NA	93	74	84	95	NA	92	91	79	76
Administrative	61	NA	86	93	74	84	95	95	NA	NA	79	80
Survey	NA	NA	NA	NA	48	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.

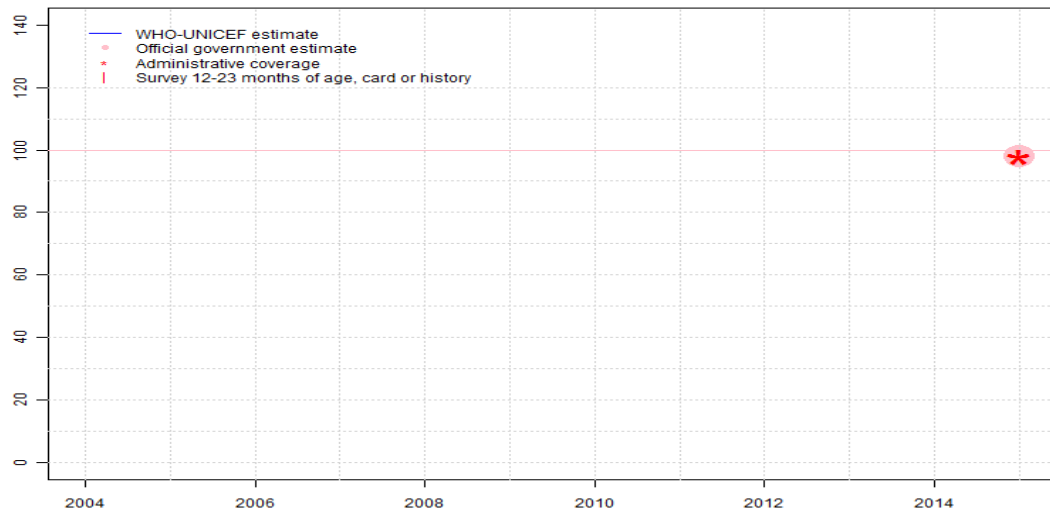
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on reported administrative data. GoC=R+ D+
- 2005: Estimate based on interpolation between data reported by national government. Estimate challenged by: D-
- 2006: Estimate based on reported administrative data. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Survey results ignored. Sample size 233 less than 300. Kiribati Demographic and Health Survey 2009 card or history results of 48 percent modified for recall bias to 66 percent based on 1st dose card or history coverage of 82 percent, 1st dose card only coverage of 21 percent and 3d dose card only coverage of 17 percent. Decline in coverage reflects a delay in receipt vaccines supplies and dissemination of vaccines to community-based nurses compounded by confusion related to the introduction of DTP-HepB-Hib vaccine a change in the measles schedule from 9 months to 12 months. Fluctuations attributed to small birth cohort. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on reported administrative data. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+
- 2013: Estimate based on coverage reported by national government. GoC=R+
- 2014: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Programme reports one month national level vaccine stock-out. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+

Kiribati - IPV1

KIR - IPV1



Description:

2015: IPV introduced in June 2015. Programme reports 98 percent coverage in 53 percent of the national target population. Estimate is based on the total annual national target population. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. Estimate challenged by: R-

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	52
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

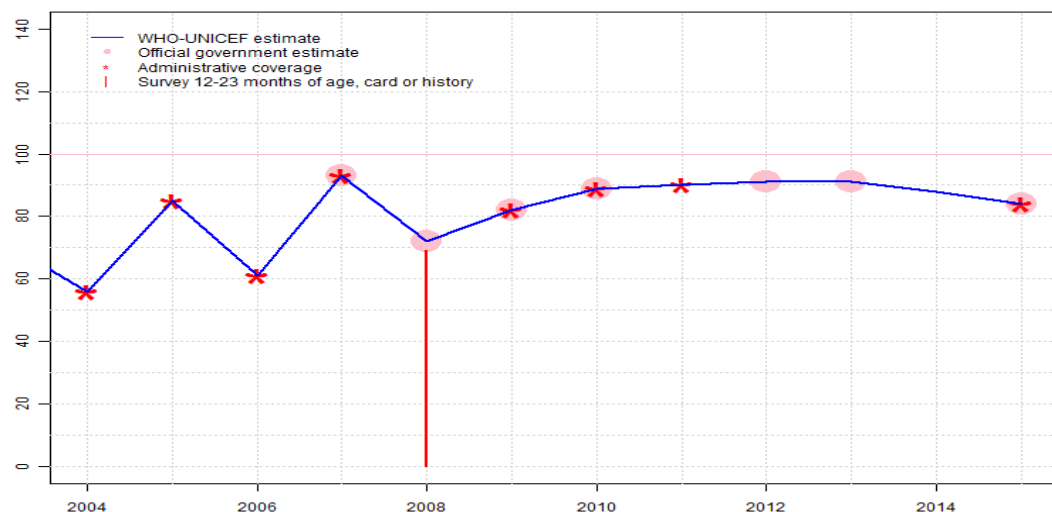
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Kiribati - MCV1

KIR - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	56	85	61	93	72	82	89	90	91	91	88	84
Estimate GoC	••	•	••	••	••	••	••	••	••	••	•	••
Official	NA	NA	NA	93	72	82	89	NA	91	91	NA	84
Administrative	56	85	61	93	NA	82	89	90	NA	NA	NA	84
Survey	NA	NA	NA	NA	69	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.

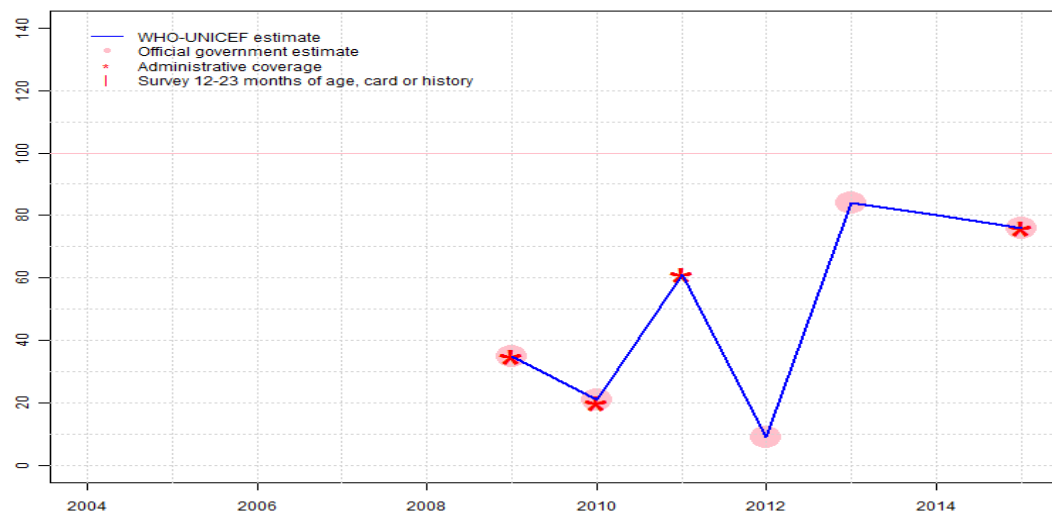
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on reported administrative data. Fluctuations attributed to small birth cohort. GoC=R+ D+
- 2005: Estimate based on reported administrative data. Fluctuations attributed to small birth cohort. Estimate challenged by: D-
- 2006: Estimate based on reported administrative data. Fluctuations attributed to small birth cohort. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Survey results ignored. Sample size 233 less than 300. Fluctuations attributed to small birth cohort. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on reported administrative data. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+
- 2013: Estimate based on coverage reported by national government. GoC=R+
- 2014: Estimate based on interpolation between data reported by national government. Fluctuations attributed to small birth cohort and incomplete subnational reporting. Estimate of 88 percent changed from previous revision value of 91 percent. GoC=No accepted empirical data
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+

Kiribati - MCV2

KIR - MCV2



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	35	21	61	9	84	80	76
Estimate GoC	NA	NA	NA	NA	NA	••	••	•	••	••	•	••
Official	NA	NA	NA	NA	NA	35	21	NA	9	84	NA	76
Administrative	NA	NA	NA	NA	NA	35	20	61	NA	NA	NA	76
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.

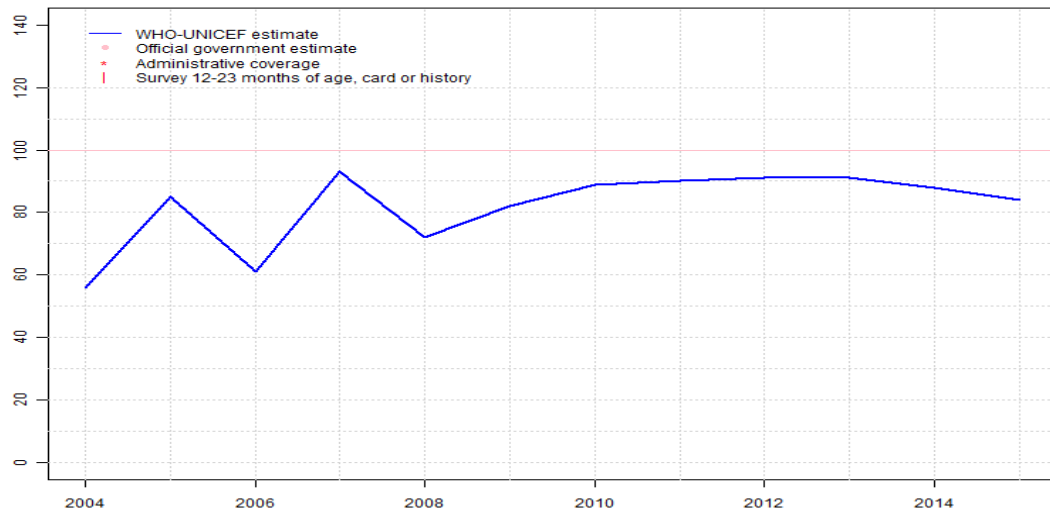
Description:

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

- 2009: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort. GoC=R+ D+
- 2011: Estimate based on reported administrative estimate. Fluctuations attributed to small birth cohort. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Decline from 2011 to 2012 is unexplained. Fluctuations attributed to small birth cohort. GoC=R+
- 2013: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort. GoC=R+
- 2014: Estimate based on interpolation between reported values. Fluctuations attributed to small birth cohort and incomplete subnational reporting. Estimate of 80 percent changed from previous revision value of 84 percent. GoC=No accepted empirical data
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+

Kiribati - RCV1

KIR - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	56	85	61	93	72	82	89	90	91	91	88	84
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.

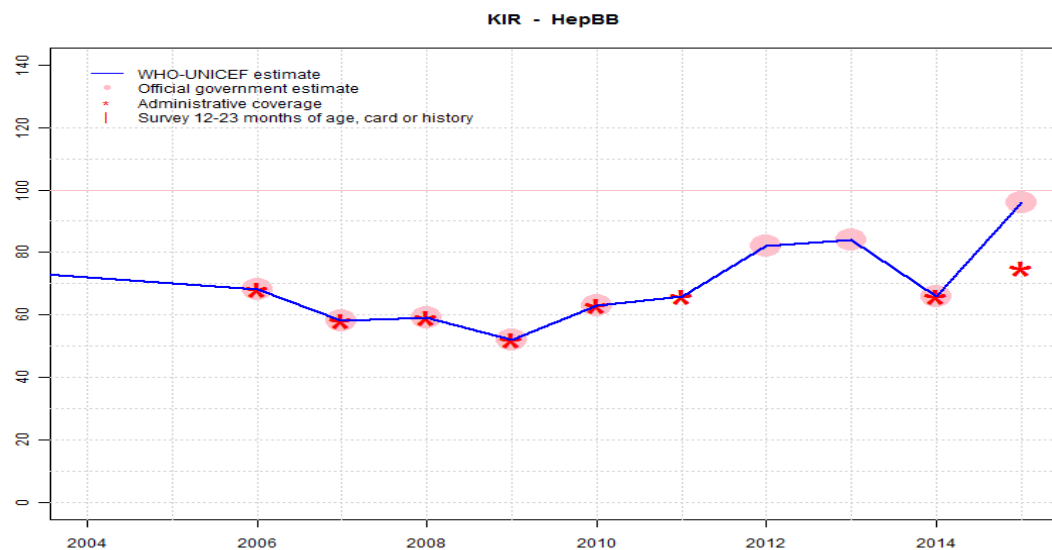
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

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=R+ D+
- 2005: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2006: Estimate based on estimated MCV1. GoC=R+ D+
- 2007: Estimate based on estimated MCV1. GoC=R+ D+
- 2008: Estimate based on estimated MCV1. GoC=R+ D+
- 2009: Estimate based on estimated MCV1. GoC=R+ D+
- 2010: Estimate based on estimated MCV1. GoC=R+ D+
- 2011: Estimate based on estimated MCV1. GoC=R+ D+
- 2012: Estimate based on estimated MCV1. GoC=R+
- 2013: Estimate based on estimated MCV1. GoC=R+
- 2014: Estimate based on estimated MCV1. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=No accepted empirical data
- 2015: Estimate based on estimated MCV1. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+

Kiribati - HepBB



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	72	70	68	58	59	52	63	66	82	84	66	96
Estimate GoC	•	•	••	••	••	••	••	••	••	••	••	•
Official	NA	NA	68	58	59	52	63	NA	82	84	66	96
Administrative	NA	NA	68	58	59	52	63	66	NA	NA	66	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: 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.

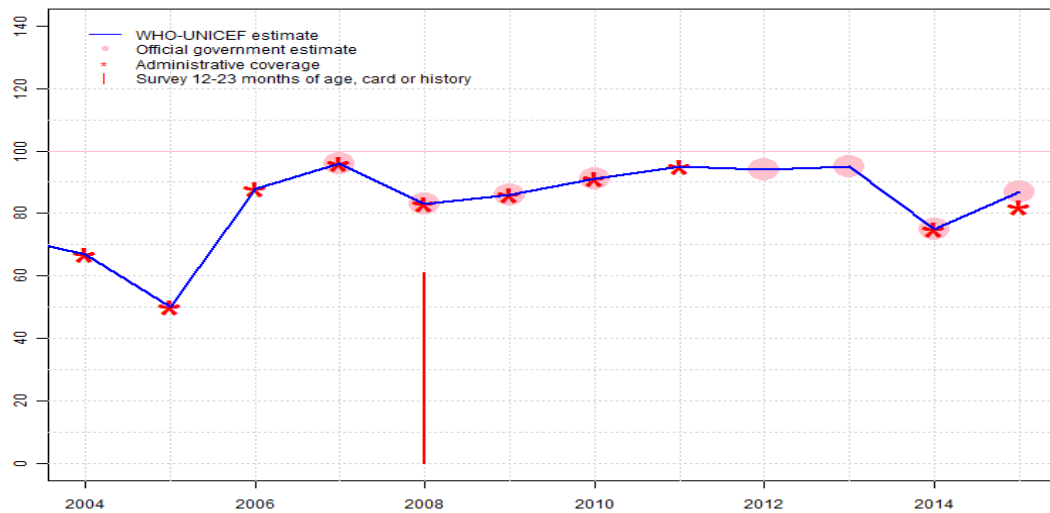
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2005: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on reported administrative estimate. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. Estimate challenged by: D-

Kiribati - HepB3

KIR - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	67	50	88	96	83	86	91	95	94	95	75	87
Estimate GoC	●●	●	●●	●●	●●	●●	●●	●	●●	●●	●●	●●
Official	NA	NA	NA	96	83	86	91	NA	94	95	75	87
Administrative	67	50	88	96	83	86	91	95	NA	NA	75	82
Survey	NA	NA	NA	NA	61	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.

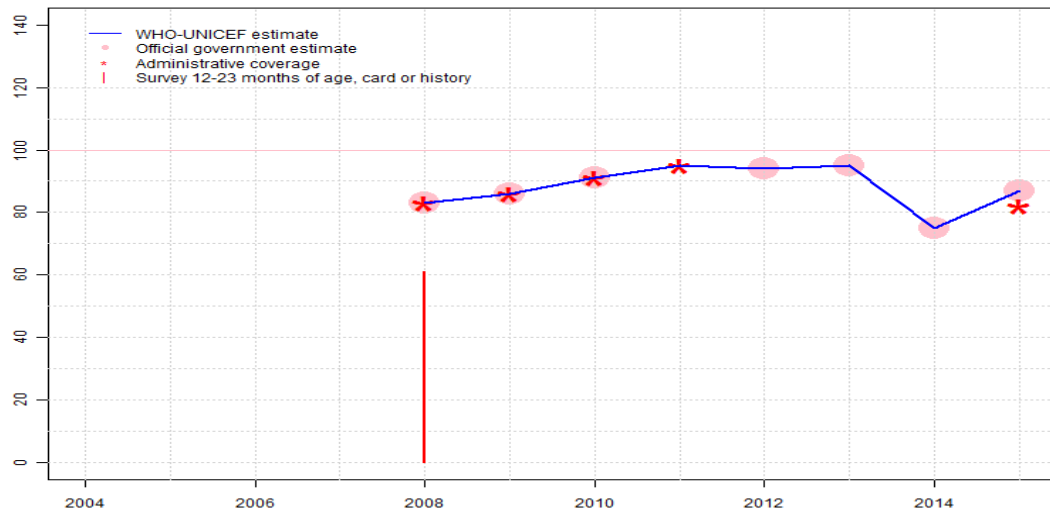
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on reported administrative data. GoC=R+ D+
- 2005: Estimate based on reported administrative data. Fluctuations attributed to small birth cohort. Estimate challenged by: D-
- 2006: Estimate based on reported administrative data. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Survey results ignored. Sample size 233 less than 300. Kiribati Demographic and Health Survey 2009 card or history results of 61 percent modified for recall bias to 68 percent based on 1st dose card or history coverage of 82 percent, 1st dose card only coverage of 17 percent and 3d dose card only coverage of 14 percent. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on reported administrative data. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+

Kiribati - Hib3

KIR - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	83	86	91	95	94	95	75	87
Estimate GoC	NA	NA	NA	NA	●●	●●	●●	●	●●	●●	●●	●●
Official	NA	NA	NA	NA	83	86	91	NA	94	95	75	87
Administrative	NA	NA	NA	NA	83	86	91	95	NA	NA	NA	82
Survey	NA	NA	NA	NA	61	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.

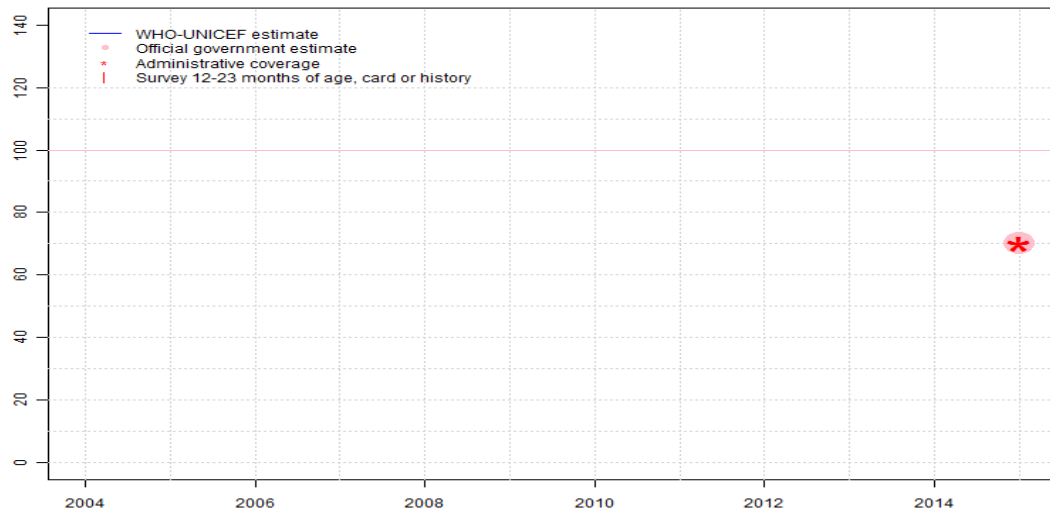
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2008: Estimate based on coverage reported by national government. Survey results ignored. Sample size 233 less than 300. Kiribati Demographic and Health Survey 2009 card or history results of 61 percent modified for recall bias to 68 percent based on 1st dose card or history coverage of 82 percent, 1st dose card only coverage of 17 percent and 3d dose card only coverage of 14 percent. Hib vaccine introduced in 2008 Vaccine presentation is DTP-HepB-Hib. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on reported administrative estimate. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. GoC=R+
- 2013: Estimate based on coverage reported by national government. GoC=R+
- 2014: Estimate based on coverage reported by national government. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+

Kiribati - RotaC

KIR - 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	37
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70
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.

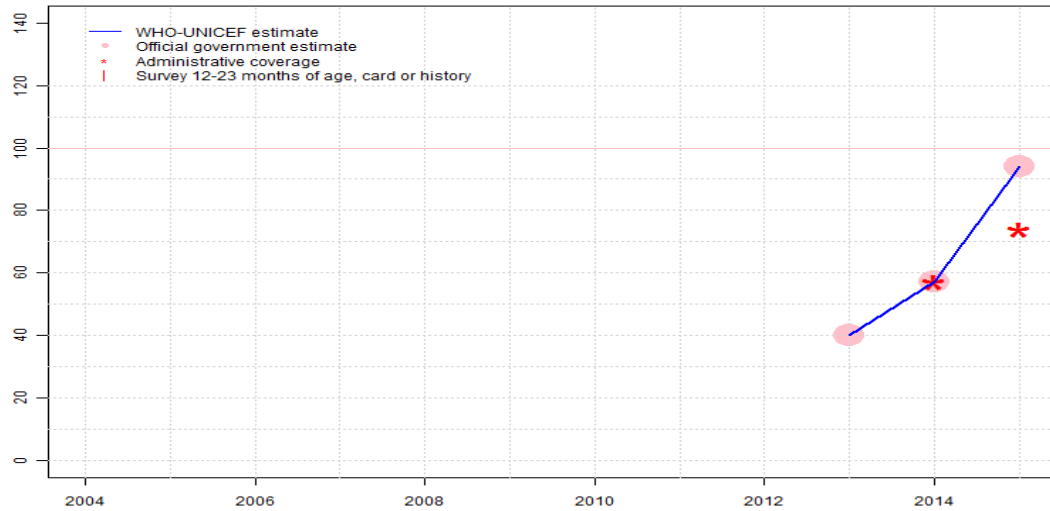
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2015: Rotavirus vaccine introduced in August 2015. Programme reports 71 per cent coverage in 53 percent of the national target population. Estimate is based on the total annual national target population. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Fluctuations attributed to small birth cohort and incomplete subnational reporting. Estimate challenged by: R-

Kiribati - PcV3

KIR - PcV3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	40	57	94
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●	●●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	40	57	94
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	57	74
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:

- 2013: Estimate based on coverage reported by national government. Pneumococcal conjugate vaccine introduced during 2013. Programme reports a four month stock-out at the national level. GoC=R+
- 2014: Estimate based on coverage reported by national government. Programme reports a three month stock-out at national level. Fluctuations attributed to small birth cohort and incomplete subnational reporting. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Programme notes their official estimates are based on actual deliveries as the administrative coverage is based on projections from the 2010 census. Programme reports one month national level vaccine stock-out. Fluctuations attributed to small birth cohort and incomplete subnational reporting. Estimate challenged by: D-

Kiribati - survey details

2008 Kiribati Demographic and Health Survey 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	88	12-23 m	233	22
BCG	Card	20	12-23 m	52	22
BCG	Card or History	89	12-23 m	233	22
BCG	History	69	12-23 m	181	22
DTP1	C or H <12 months	80	12-23 m	233	22
DTP1	Card	17	12-23 m	52	22
DTP1	Card or History	82	12-23 m	233	22
DTP1	History	66	12-23 m	181	22
DTP3	C or H <12 months	58	12-23 m	233	22
DTP3	Card	14	12-23 m	52	22
DTP3	Card or History	61	12-23 m	233	22
DTP3	History	48	12-23 m	181	22
HepB1	C or H <12 months	80	12-23 m	233	22
HepB1	Card	17	12-23 m	52	22
HepB1	Card or History	82	12-23 m	233	22
HepB1	History	66	12-23 m	181	22
HepB3	C or H <12 months	58	12-23 m	233	22
HepB3	Card	14	12-23 m	52	22
HepB3	Card or History	61	12-23 m	233	22
HepB3	History	48	12-23 m	181	22
Hib1	C or H <12 months	80	12-23 m	233	22
Hib1	Card	17	12-23 m	52	22
Hib1	Card or History	82	12-23 m	233	22
Hib1	History	66	12-23 m	181	22
Hib3	C or H <12 months	58	12-23 m	233	22
Hib3	Card	14	12-23 m	52	22
Hib3	Card or History	61	12-23 m	233	22
Hib3	History	48	12-23 m	181	22
MCV1	C or H <12 months	11	12-23 m	233	22
MCV1	Card	9	12-23 m	52	22
MCV1	Card or History	69	12-23 m	233	22
MCV1	History	60	12-23 m	181	22
Pol1	C or H <12 months	80	12-23 m	233	22
Pol1	Card	21	12-23 m	52	22
Pol1	Card or History	82	12-23 m	233	22
Pol1	History	61	12-23 m	181	22
Pol3	C or H <12 months	43	12-23 m	233	22

Pol3	Card	17	12-23 m	52	22
Pol3	Card or History	48	12-23 m	233	22
Pol3	History	32	12-23 m	181	22

2007 Kiribati Demographic and Health Survey 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	84	24-35 m	202	22
DTP1	C or H <12 months	82	24-35 m	202	22
DTP3	C or H <12 months	50	24-35 m	202	22
MCV1	C or H <12 months	7	24-35 m	202	22
Pol1	C or H <12 months	79	24-35 m	202	22
Pol3	C or H <12 months	37	24-35 m	202	22

2006 Kiribati Demographic and Health Survey 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	82	36-47 m	200	22
DTP1	C or H <12 months	84	36-47 m	200	22
DTP3	C or H <12 months	42	36-47 m	200	22
MCV1	C or H <12 months	12	36-47 m	200	22
Pol1	C or H <12 months	80	36-47 m	200	22
Pol3	C or H <12 months	43	36-47 m	200	22

2005 Kiribati Demographic and Health Survey 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	72	48-59 m	181	22
DTP1	C or H <12 months	66	48-59 m	181	22
DTP3	C or H <12 months	32	48-59 m	181	22
MCV1	C or H <12 months	15	48-59 m	181	22
Pol1	C or H <12 months	60	48-59 m	181	22
Pol3	C or H <12 months	23	48-59 m	181	22

Kiribati - survey details

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

Kiribati

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

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

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

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

The model was used in the mid to late 2000. Currently, the coverage series developed by the model is used as the baseline, and efforts are made to obtain data from all sources that include the JRF and reported trend over the years, routine PAB reporting and its trend over the years, data from surveys (DHS, MICS, EPI), whether countries have been validated for the attainment of maternal and neonatal tetanus elimination and what the TT coverage figures are from the survey etc and all the information is used to arrive at an estimate of the protection-at-birth from TT vaccination.

Year	PAB coverage estimate (%)
2004	38
2005	45
2006	55
2007	43
2008	42
2009	79
2010	80
2011	83
2012	85
2013	90
2014	90
2015	90

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