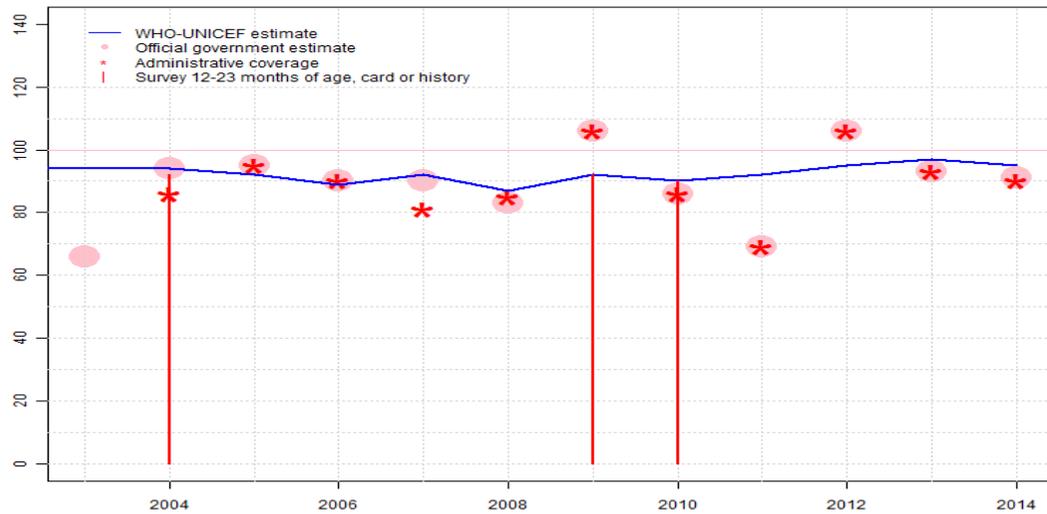


# Iraq - BCG

IRQ - BCG



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	94	94	92	89	90	87	92	90	92	95	97	95
Estimate GoC	•	•••	•	•	••	•	•	•	••	•	•	•
Official	66	94	95	90	90	83	106	86	69	106	93	91
Administrative	NA	86	95	90	81	85	106	86	69	106	93	90
Survey	NA	92	NA	NA	NA	NA	92	90	NA	NA	NA	NA

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

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

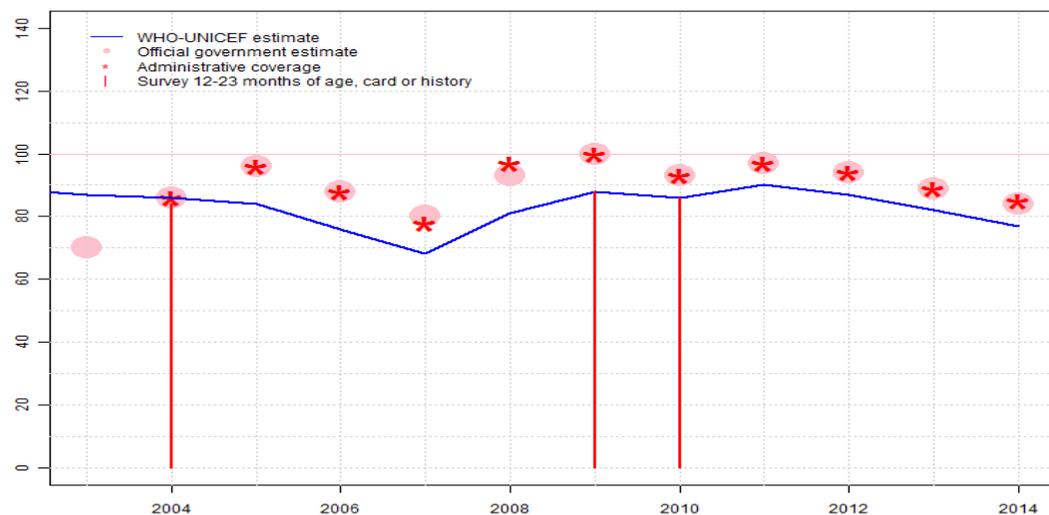
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on interpolation between 1999 and 2004 levels. Service and reporting system effected by local situation Estimate challenged by: R-
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 92 percent based on 1 survey(s). GoC=R+ S+ D+
- 2005: Service and reporting system effected by local situation Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 and 2009 levels. GoC=S+ D+
- 2008: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2009: Estimate is based on survey results. Reported data excluded. 106 percent greater than 100 percent. Reported data excluded. Unexplained increase from 83 percent to 106 percent with decrease 86 percent. Estimate challenged by: D-R-
- 2010: Estimate is based on survey results. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Reported data excluded. Decline in reported coverage from 86 percent to 69 percent with increase to 106 percent. Estimate of 92 percent changed from previous revision value of 90 percent. GoC=S+ D+
- 2012: Reported data calibrated to 2010 levels. Reported data excluded. 106 percent greater than 100 percent. Reported data excluded. Unexplained increase from 69 percent to 106 percent with decrease 93 percent. Estimate of 95 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Estimate of 97 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2014: Reported data calibrated to 2010 levels. Estimate challenged by: D-

# Iraq - DTP1

IRQ - DTP1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	87	86	84	76	68	81	88	86	90	87	82	77
Estimate GoC	•	•••	•	•	•	•	•	•	•	•	•	•
Official	70	86	96	88	80	93	100	93	97	94	89	84
Administrative	NA	86	96	88	78	97	100	93	97	94	89	85
Survey	NA	84	NA	NA	NA	NA	88	86	NA	NA	NA	NA

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

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

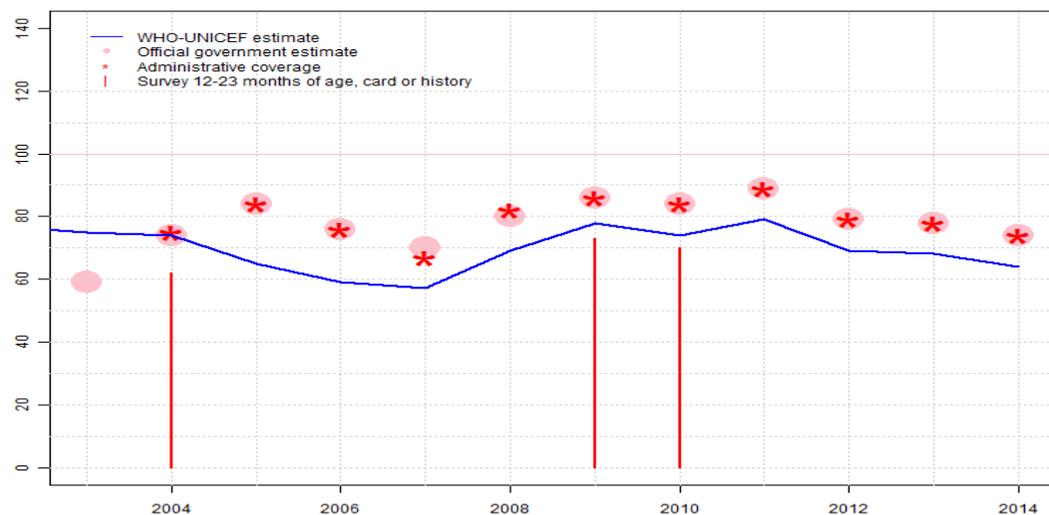
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on interpolation between 1999 and 2004 levels. Service and reporting system effected by local situation Reported data excluded. Decline in reported coverage from 82 percent to 70 percent with increase to 86 percent. Estimate challenged by: R-
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 84 percent based on 1 survey(s). GoC=R+ S+ D+
- 2005: Service and reporting system effected by local situation Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2009: Estimate is based on survey results. Estimate challenged by: D-R-
- 2010: Estimate is based on survey results. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. DTP-HepB-Hib pentavalent and DTP-Hib tetravalent vaccines introduced in 2012. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2014: Reported data calibrated to 2010 levels. Programme reports four months stock-out at national level. Reported number of children vaccinated is increasing since 2012 but continues to fall short of the reported number of children vaccinated with DTP containing vaccines during 2011. Estimate challenged by: D-

# Iraq - DTP3

IRQ - DTP3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	75	74	65	59	57	69	78	74	79	69	68	64
Estimate GoC	•	•••	•	•	•	•	•	•	•	•	•	•
Official	59	74	84	76	70	80	86	84	89	79	78	74
Administrative	NA	75	84	76	67	82	86	84	89	79	78	74
Survey	NA	62	NA	NA	NA	NA	73	70	NA	NA	NA	NA

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

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

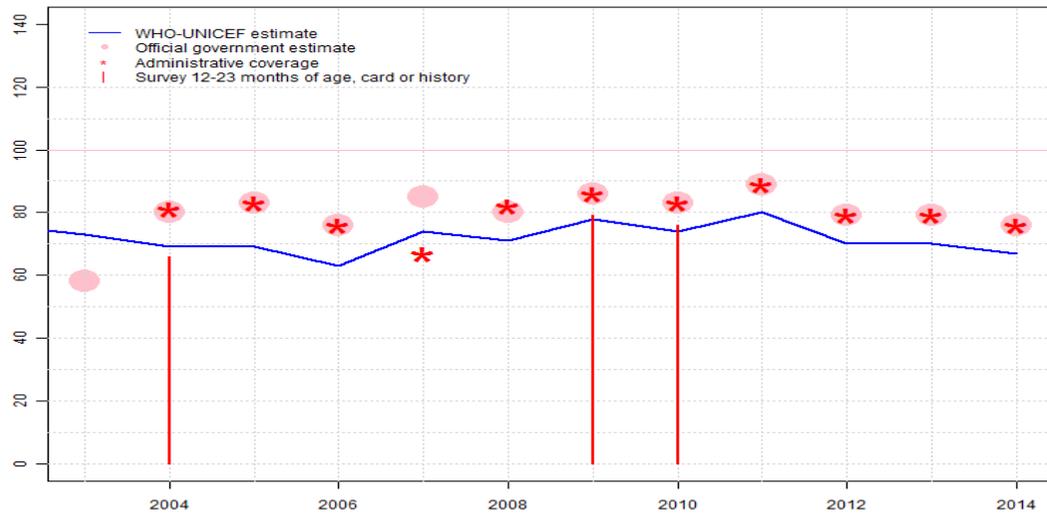
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on interpolation between 1999 and 2004 levels. Service and reporting system effected by local situation Reported data excluded. Decline in reported coverage from 74 percent to 59 percent with increase to 74 percent. Estimate challenged by: R-
- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 65 percent based on 1 survey(s). Iraq Multiple Indicator Cluster Survey 2006 card or history results of 62 percent modified for recall bias to 65 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 49 percent and 3d dose card only coverage of 38 percent. GoC=R+ S+ D+
- 2005: Service and reporting system effected by local situation Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2009: Estimate is based on survey results. Iraq Multiple Indicator Cluster Survey 2011 card or history results of 73 percent modified for recall bias to 78 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 63 percent and 3d dose card only coverage of 56 percent. Estimate challenged by: D-R-
- 2010: Estimate is based on survey results. Iraq Multiple Indicator Cluster Survey 2011 card or history results of 70 percent modified for recall bias to 74 percent based on 1st dose card or history coverage of 86 percent, 1st dose card only coverage of 66 percent and 3d dose card only coverage of 57 percent. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. DTP-HepB-Hib pentavalent and DTP-Hib tetravalent vaccines introduced in 2012. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2014: Reported data calibrated to 2010 levels. Programme reports four months stock-out at national level. Reported number of children vaccinated is increasing since 2012 but continues to fall short of the reported number of children vaccinated with DTP containing vaccines during 2011. Estimate challenged by: D-

# Iraq - Pol3

IRQ - Pol3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	73	69	69	63	74	71	78	74	80	70	70	67
Estimate GoC	•	•	•	•	••	•	•	•	•	•	•	•
Official	58	80	83	76	85	80	86	83	89	79	79	76
Administrative	NA	81	83	76	67	82	86	83	89	79	79	76
Survey	NA	66	NA	NA	NA	NA	79	76	NA	NA	NA	NA

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

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

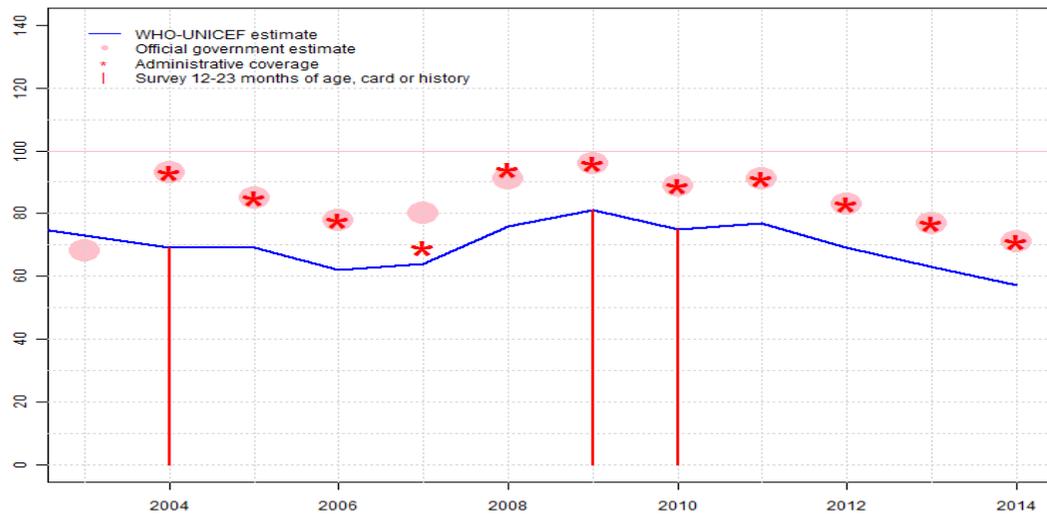
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on interpolation between 1999 and 2004 levels. Service and reporting system effected by local situation Reported data excluded. Decline in reported coverage from 82 percent to 58 percent with increase to 80 percent. Estimate challenged by: R-
- 2004: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 69 percent based on 1 survey(s). Iraq Multiple Indicator Cluster Survey 2006 card or history results of 66 percent modified for recall bias to 69 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 49 percent and 3d dose card only coverage of 37 percent. Estimate challenged by: D-R-
- 2005: Service and reporting system effected by local situation Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 and 2009 levels. GoC=S+ D+
- 2008: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-S-
- 2009: Card-based evidence from the 2010 MICS results shows identical coverage levels for Pol3 and DTP3. Estimate follows estimated DTP3 coverage. Iraq Multiple Indicator Cluster Survey 2011 card or history results of 79 percent modified for recall bias to 82 percent based on 1st dose card or history coverage of 92 percent, 1st dose card only coverage of 63 percent and 3d dose card only coverage of 56 percent. Estimate challenged by: D-R-S-
- 2010: Card-based evidence from the 2010 MICS results shows identical coverage levels for Pol3 and DTP3. Estimate follows estimated DTP3 coverage. Iraq Multiple Indicator Cluster Survey 2011 results ignored by working group. Recall-based survey results likely include campaign doses. Survey results ignored. Iraq Multiple Indicator Cluster Survey 2011 card or history results of 76 percent modified for recall bias to 77 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 67 percent and 3d dose card only coverage of 57 percent. Estimate challenged by: D-R-S-
- 2011: Reported data calibrated to 2010 levels. Estimate challenged by: D-S-
- 2012: Reported data calibrated to 2010 levels. Estimate challenged by: D-S-
- 2013: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2014: Reported data calibrated to 2010 levels. Estimate challenged by: D-

# Iraq - MCV1

IRQ - MCV1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	73	69	69	62	64	76	81	75	77	69	63	57
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	68	93	85	78	80	91	96	89	91	83	77	71
Administrative	NA	93	85	78	69	94	96	89	91	83	77	71
Survey	NA	69	NA	NA	NA	NA	81	75	NA	NA	NA	NA

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

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

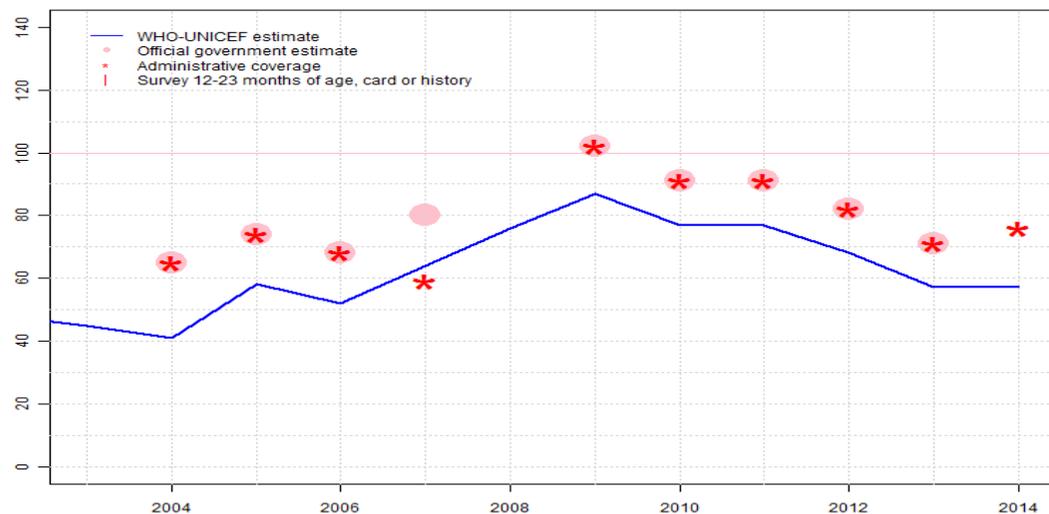
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on interpolation between 1999 and 2004 levels. Service and reporting system effected by local situation Reported data excluded. Decline in reported coverage from 80 percent to 68 percent with increase to 93 percent. Estimate challenged by: R-
- 2004: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 69 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2005: Service and reporting system effected by local situation Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 and 2009 levels. Estimate challenged by: D-
- 2009: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 81 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 75 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2014: Reported data calibrated to 2010 levels. Programme reports five months stock-out of measles containing vaccine at national level. Estimate challenged by: D-

# Iraq - MCV2

IRQ - MCV2



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	45	41	58	52	64	76	87	77	77	68	57	57
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	65	74	68	80	NA	102	91	91	82	71	NA
Administrative	NA	65	74	68	59	NA	102	91	91	82	71	76
Survey	NA											

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

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

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

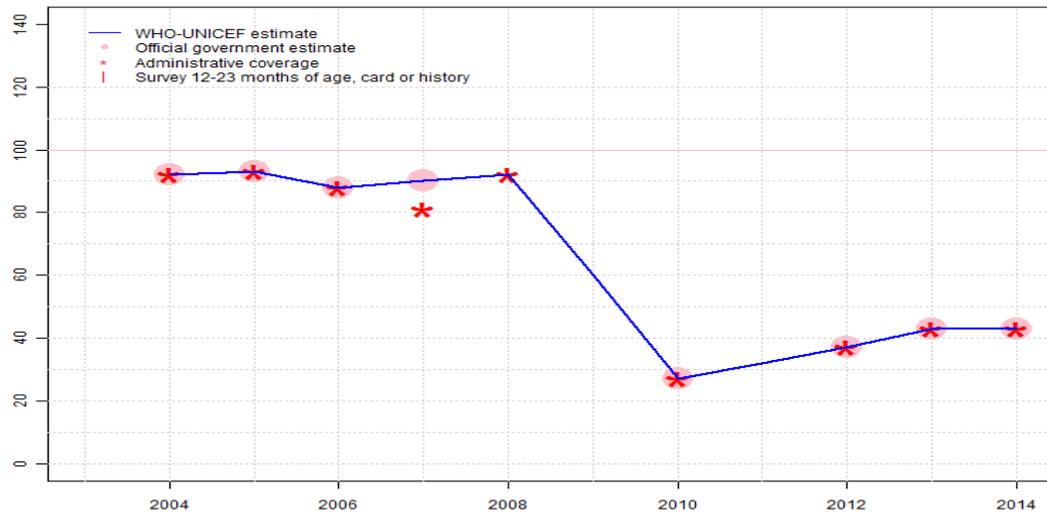
## Description:

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

- 2003: Reported data calibrated to 2001 and 2004 levels. GoC=No accepted empirical data
- 2004: Estimate follows reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-
- 2005: Estimate follows reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-
- 2006: Estimate follows reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-
- 2006: Estimate follows reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-
- 2007: Estimate follows reported data calibrated based on MCV adjustment factor. Estimate challenged by: R-
- 2008: Reported data calibrated to 2007 and 2009 levels. GoC=No accepted empirical data
- 2009: Estimate follows reported data calibrated based on MCV adjustment factor. Reported data excluded. 102 percent greater than 100 percent. Estimate challenged by: D-
- 2010: Estimate follows reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-
- 2011: Estimate follows reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-
- 2012: Estimate follows reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-
- 2013: Estimate follows reported data calibrated based on MCV adjustment factor. Estimate challenged by: D-R-
- 2014: Reported data calibrated to 2013 levels. Reported data excluded. Programme reports five months stock-out of measles containing vaccine at national level. There is no apparent impact of the stock-out on reported coverage. In fact, counterintuitively the reported administrative coverage increased. Estimate challenged by: D-

# Iraq - HepBB

IRQ - HepBB



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	92	93	88	90	92	60	27	32	37	43	43
Estimate GoC	NA	●	●	●	●	●	●	●●	●	●●	●	●
Official	NA	92	93	88	90	NA	NA	27	NA	37	43	43
Administrative	NA	92	93	88	81	92	NA	27	NA	37	43	43
Survey	NA											

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

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

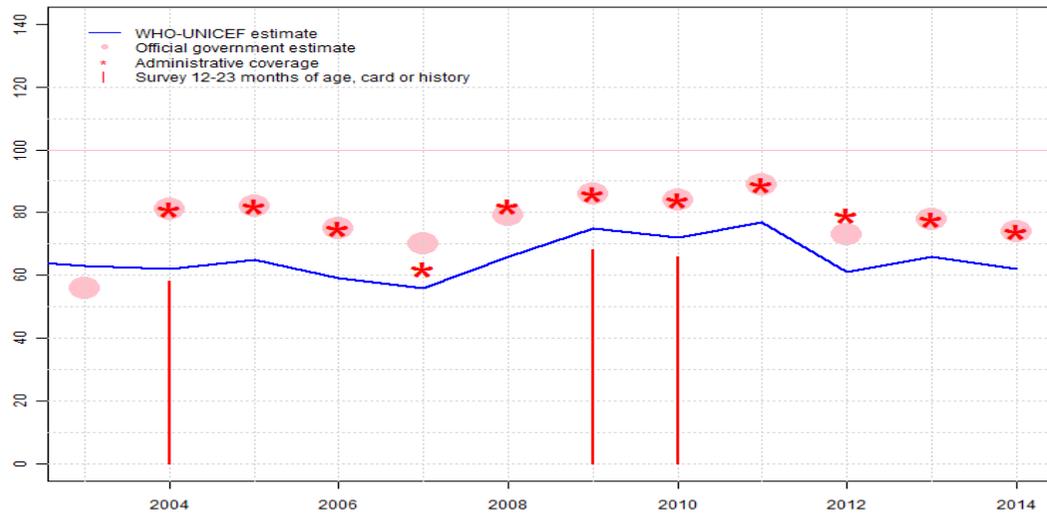
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. HepB birth dose introduced 2004. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2008: Estimate based on reported administrative estimate. Estimate challenged by: D-
- 2009: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2010: Estimate based on coverage reported by national government. Decline in coverage is unexplained. GoC=R+ D+
- 2011: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-

# Iraq - HepB3

IRQ - HepB3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	63	62	65	59	56	66	75	72	77	61	66	62
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	56	81	82	75	70	79	86	84	89	73	78	74
Administrative	NA	81	82	75	62	82	86	84	89	79	78	74
Survey	NA	58	NA	NA	NA	NA	68	66	NA	NA	NA	NA

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

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

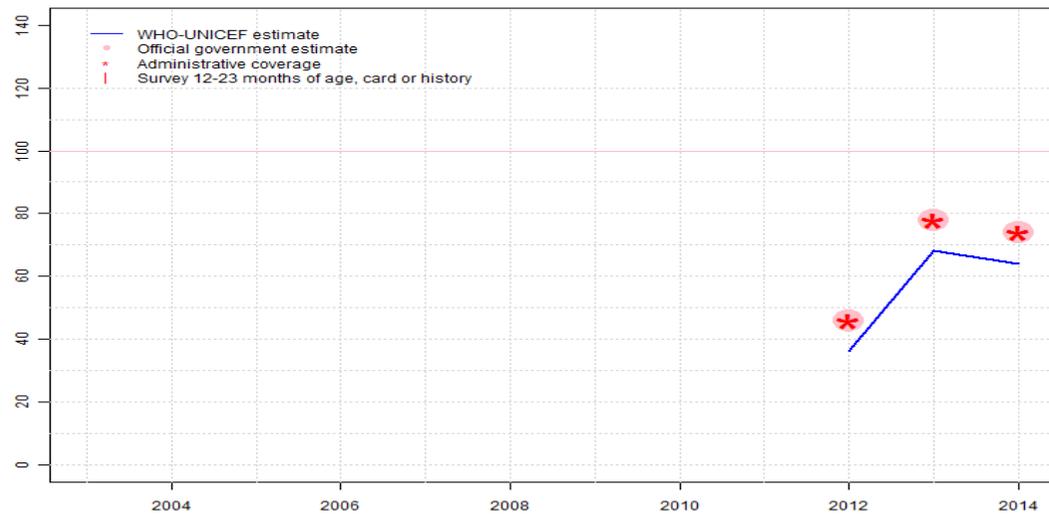
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on interpolation between 2000 and 2004 levels. Service and reporting system effected by local situation Reported data excluded. Decline in reported coverage from 74 percent to 56 percent with increase to 81 percent. Estimate challenged by: R-
- 2004: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 62 percent based on 1 survey(s). Iraq Multiple Indicator Cluster Survey 2006 card or history results of 58 percent modified for recall bias to 62 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 54 percent and 3d dose card only coverage of 38 percent. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 2004 and 2009 levels. Service and reporting system effected by local situation Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2004 and 2009 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2004 and 2009 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2004 and 2009 levels. Estimate challenged by: D-
- 2009: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 75 percent based on 1 survey(s). Iraq Multiple Indicator Cluster Survey 2011 card or history results of 68 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 90 percent, 1st dose card only coverage of 66 percent and 3d dose card only coverage of 55 percent. Estimate challenged by: D-R-
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 72 percent based on 1 survey(s). Iraq Multiple Indicator Cluster Survey 2011 card or history results of 66 percent modified for recall bias to 72 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 70 percent and 3d dose card only coverage of 57 percent. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2012: Reported data calibrated to 2010 levels. DTP-HepB-Hib pentavalent vaccine introduced in 2012. Estimate challenged by: D-
- 2013: Reported data calibrated to 2010 levels. Estimate challenged by: D-
- 2014: Reported data calibrated to 2010 levels. Programme reports four months stock-out at national level. Estimate challenged by: D-

# Iraq - Hib3

IRQ - Hib3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	36	68	64								
Estimate GoC	NA	•	•	•								
Official	NA	46	78	74								
Administrative	NA	46	78	74								
Survey	NA											

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

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

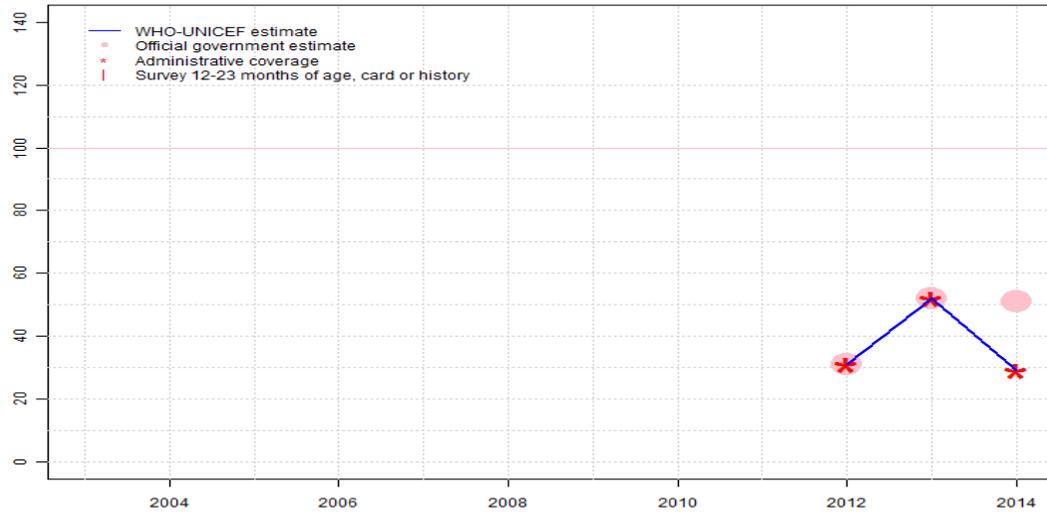
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2012: Reported data calibrated to 2013 levels. Hib vaccine introduced in 2012. The presentations are DTP-Hib and DTP-HepB-Hib. Estimate challenged by: D-
- 2013: Estimate is based on DTP3 coverage level. Estimate challenged by: D-R-
- 2014: Reported data calibrated to 2013 levels. Programme reports four months stock-out at national level. Estimate challenged by: D-

# Iraq - RotaC

IRQ - RotaC



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	31	52	29								
Estimate GoC	NA	●●	●	●●								
Official	NA	31	52	51								
Administrative	NA	31	52	29								
Survey	NA											

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

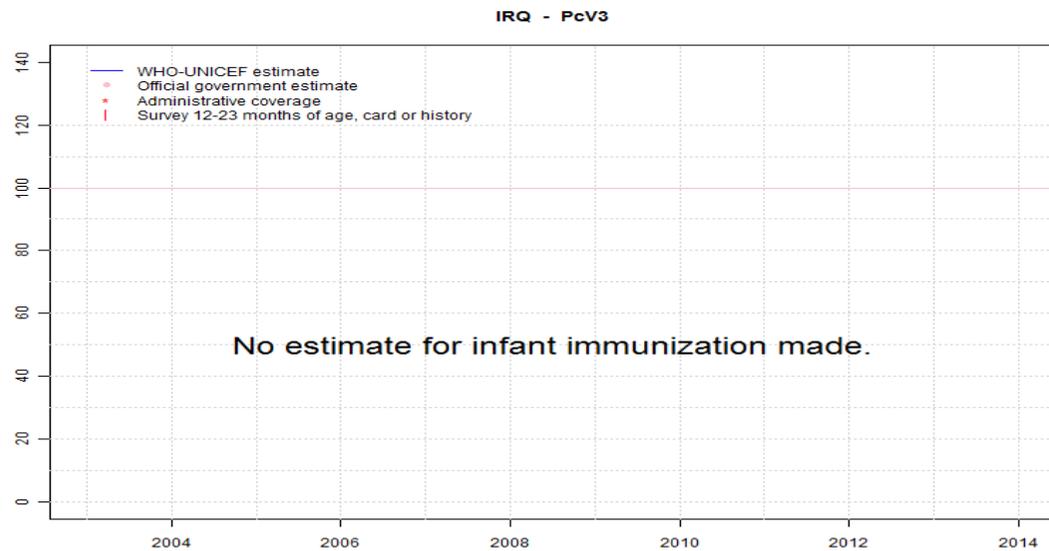
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

## Description:

- 2012: Estimate based on coverage reported by national government. Rotavirus vaccine introduced in 2012. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. Estimate is based on reported data. Estimate challenged by: D-
- 2014: Estimate based on reported administrative estimate. Estimate is based on reported data. Programme reports five months stock-out at national level. GoC=R+ D+

# Iraq - PcV3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA											
Estimate GoC	NA											
Official	NA											
Administrative	NA											
Survey	NA											

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

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

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

# Iraq - survey details

## 2010 Iraq Multiple Indicator Cluster Survey 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	90	12-23 m	-	70
BCG	Card	68	12-23 m	-	70
BCG	Card or History	90	12-23 m	7487	70
BCG	History	22	12-23 m	-	70
DTP1	C or H <12 months	85	12-23 m	-	70
DTP1	Card	66	12-23 m	-	70
DTP1	Card or History	86	12-23 m	7487	70
DTP1	History	20	12-23 m	-	70
DTP3	C or H <12 months	65	12-23 m	-	70
DTP3	Card	57	12-23 m	-	70
DTP3	Card or History	70	12-23 m	7487	70
DTP3	History	13	12-23 m	-	70
HepB1	C or H <12 months	88	12-23 m	-	70
HepB1	Card	70	12-23 m	-	70
HepB1	Card or History	89	12-23 m	7487	70
HepB1	History	19	12-23 m	-	70
HepB3	C or H <12 months	61	12-23 m	-	70
HepB3	Card	57	12-23 m	-	70
HepB3	Card or History	66	12-23 m	7487	70
HepB3	History	9	12-23 m	-	70
MCV1	C or H <12 months	66	12-23 m	-	70
MCV1	Card	54	12-23 m	-	70
MCV1	Card or History	75	12-23 m	7487	70
MCV1	History	21	12-23 m	-	70
Pol1	C or H <12 months	90	12-23 m	-	70
Pol1	Card	67	12-23 m	-	70
Pol1	Card or History	91	12-23 m	7487	70
Pol1	History	24	12-23 m	-	70
Pol3	C or H <12 months	71	12-23 m	-	70
Pol3	Card	57	12-23 m	-	70
Pol3	Card or History	76	12-23 m	7487	70
Pol3	History	19	12-23 m	-	70

## 2009 Iraq Multiple Indicator Cluster Survey 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	91	18-29 m	-	70
BCG	Card	65	18-29 m	-	70
BCG	Card or History	92	18-29 m	7524	70
BCG	History	27	18-29 m	-	70
DTP1	C or H <12 months	86	18-29 m	-	70
DTP1	Card	63	18-29 m	-	70
DTP1	Card or History	88	18-29 m	7524	70
DTP1	History	25	18-29 m	-	70
DTP3	C or H <12 months	65	18-29 m	-	70
DTP3	Card	56	18-29 m	-	70
DTP3	Card or History	73	18-29 m	7524	70
DTP3	History	18	18-29 m	-	70
HepB1	C or H <12 months	89	18-29 m	-	70
HepB1	Card	66	18-29 m	-	70
HepB1	Card or History	90	18-29 m	7524	70
HepB1	History	24	18-29 m	-	70
HepB3	C or H <12 months	60	18-29 m	-	70
HepB3	Card	55	18-29 m	-	70
HepB3	Card or History	68	18-29 m	7524	70
HepB3	History	13	18-29 m	-	70
MCV1	C or H <18 months	77	18-29 m	-	70
MCV1	Card	55	18-29 m	-	70
MCV1	Card or History	81	18-29 m	7524	70
MCV1	History	26	18-29 m	-	70
Pol1	C or H <12 months	90	18-29 m	-	70
Pol1	Card	63	18-29 m	-	70
Pol1	Card or History	92	18-29 m	7524	70
Pol1	History	29	18-29 m	-	70
Pol3	C or H <12 months	70	18-29 m	-	70
Pol3	Card	56	18-29 m	-	70
Pol3	Card or History	79	18-29 m	7524	70
Pol3	History	23	18-29 m	-	70

## 2004 Iraq Multiple Indicator Cluster Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	91	18-29 m	3329	55
BCG	Card	54	18-29 m	3329	55

# Iraq - survey details

BCG	Card or History	92	18-29 m	3329	55
BCG	History	39	18-29 m	3329	55
DTP1	C or H <12 months	82	18-29 m	3329	55
DTP1	Card	49	18-29 m	3329	55
DTP1	Card or History	84	18-29 m	3329	55
DTP1	History	36	18-29 m	3329	55
DTP3	C or H <12 months	53	18-29 m	3329	55
DTP3	Card	38	18-29 m	3329	55
DTP3	Card or History	62	18-29 m	3329	55
DTP3	History	24	18-29 m	3329	55
HepB1	C or H <12 months	87	18-29 m	3329	55
HepB1	Card	54	18-29 m	3329	55
HepB1	Card or History	88	18-29 m	3329	55
HepB1	History	34	18-29 m	3329	55
HepB3	C or H <12 months	49	18-29 m	3329	55
HepB3	Card	38	18-29 m	3329	55
HepB3	Card or History	58	18-29 m	3329	55
HepB3	History	19	18-29 m	3329	55
MCV1	Card	39	18-29 m	3329	55
MCV1	Card or History	69	18-29 m	3329	55
MCV1	History	31	18-29 m	3329	55

Pol1	C or H <12 months	88	18-29 m	3329	55
Pol1	Card	49	18-29 m	3329	55
Pol1	Card or History	91	18-29 m	3329	55
Pol1	History	42	18-29 m	3329	55
Pol3	C or H <12 months	57	18-29 m	3329	55
Pol3	Card	37	18-29 m	3329	55
Pol3	Card or History	66	18-29 m	3329	55
Pol3	History	28	18-29 m	3329	55

## 1999 Iraq Multiple Indicator Cluster Survey 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	93	12-23 m	434	78
DTP1	Card or History	93	12-23 m	434	78
DTP3	Card or History	81	12-23 m	434	78
MCV1	Card or History	90	12-23 m	434	78
Pol1	Card or History	96	12-23 m	434	78
Pol3	Card or History	87	12-23 m	434	78

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

## Iraq

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

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

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

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

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

Year	PAB coverage estimate (%)
2003	88
2004	88
2005	71
2006	70
2007	69
2008	69
2009	69
2010	80
2011	85
2012	85
2013	72
2014	72

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