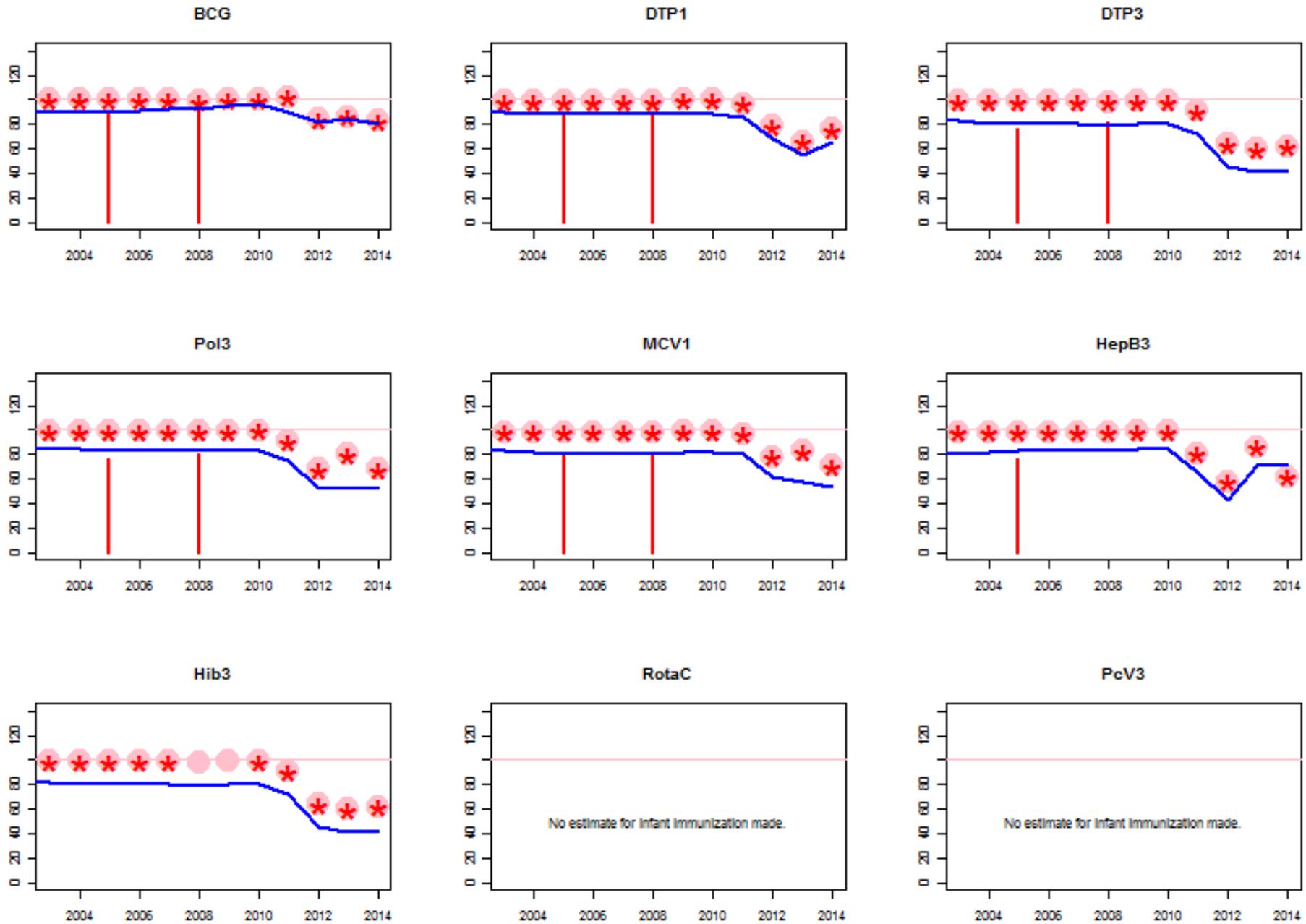
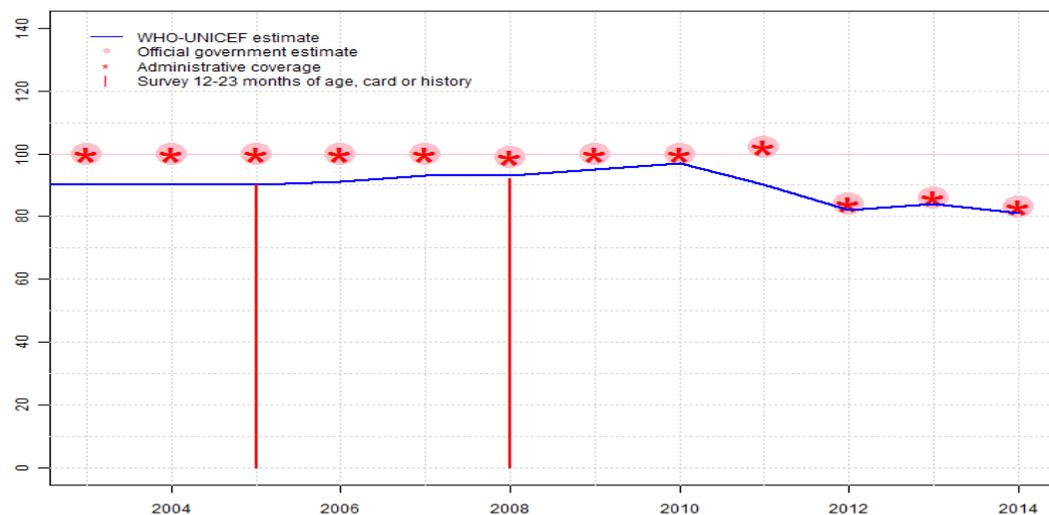


Syrian Arab Republic: WHO and UNICEF estimates of immunization coverage: 2014 revision



# Syrian Arab Republic - BCG

SYR - BCG



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	90	90	90	91	93	93	95	97	90	82	84	81
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	100	100	100	100	100	99	100	100	102	84	86	83
Administrative	100	100	100	100	100	99	100	100	102	84	86	83
Survey	NA	NA	90	NA	NA	92	NA	NA	NA	NA	NA	NA

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

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

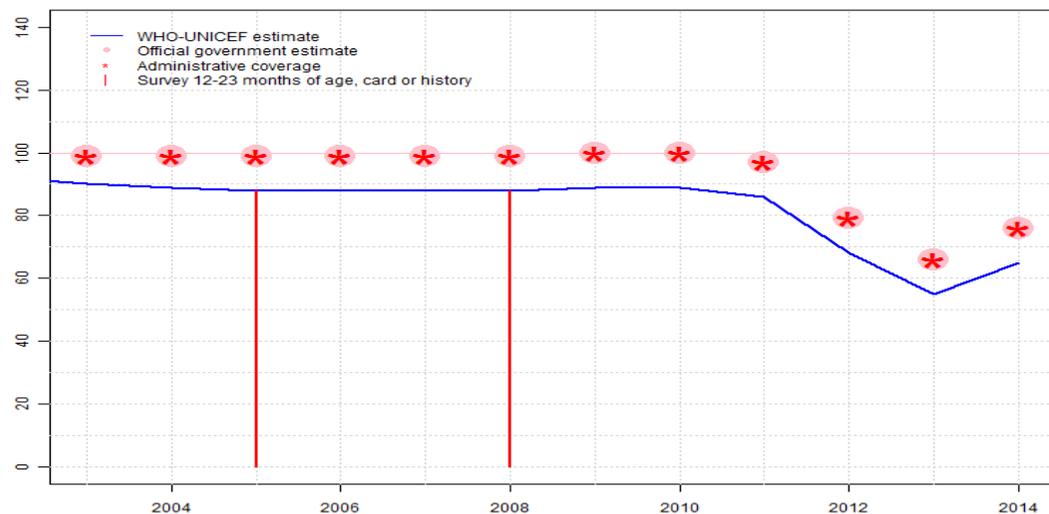
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2004: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2005: Estimate is based on survey results for all antigens. Estimates for other vaccines referenced to survey data point. Estimate for BCG based on survey results. Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 and 2011 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 and 2011 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 and 2011 levels. Survey results ignored. Sample size 0 less than 300. Estimate challenged by: D-
- 2009: Reported data calibrated to 2005 and 2011 levels. Estimate challenged by: D-
- 2010: Reported data calibrated to 2005 and 2011 levels. Estimate challenged by: D-
- 2011: Estimate is based on the reported data calibrated to the level of the 2005 survey. Reported data excluded. 102 percent greater than 100 percent. Estimate challenged by: D-R-
- 2012: Reported data calibrated to 2011 levels. Low levels of coverage associated with the interruption of health services during period of civil unrest. GoC=Assigned by working group. Consistent with other vaccines.
- 2013: Reported data calibrated to 2011 levels. Programme reports a one month stockout at national level and in 75 districts. Low levels of coverage associated with the interruption of health services during period of civil unrest. GoC=Assigned by working group. Consistent with other vaccines.
- 2014: Reported data calibrated to 2011 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Consistent with other vaccines.

# Syrian Arab Republic - DTP1

SYR - DTP1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	90	89	88	88	88	88	89	89	86	68	55	65
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	99	99	99	99	99	99	100	100	97	79	66	76
Administrative	99	99	99	99	99	99	100	100	97	79	66	76
Survey	NA	NA	88	NA	NA	88	NA	NA	NA	NA	NA	NA

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

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

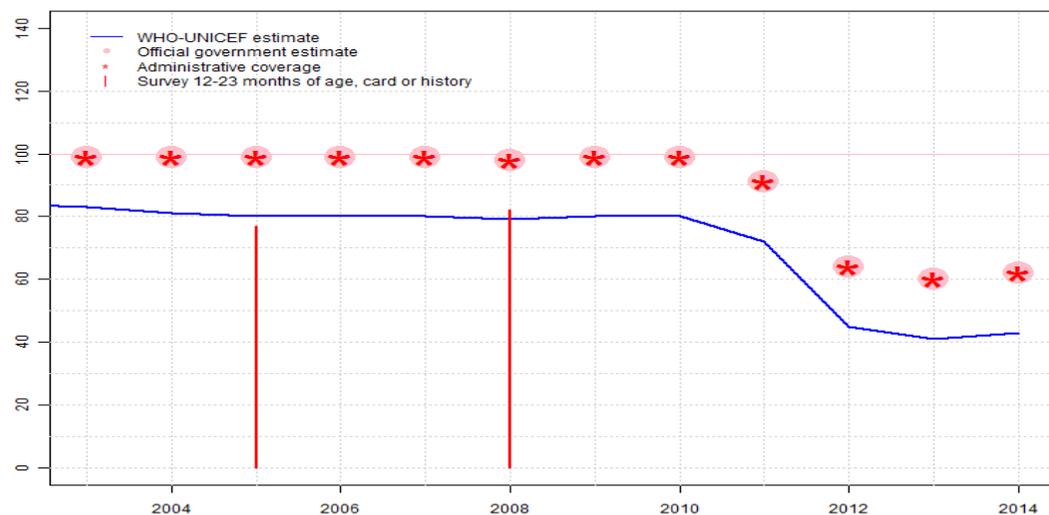
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2004: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2005: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 88 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 levels. Survey results ignored. Sample size 0 less than 300. GoC=No accepted empirical data
- 2009: Reported data calibrated to 2005 levels. GoC=No accepted empirical data
- 2010: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2011: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2012: Reported data calibrated to 2005 levels. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2013: Reported data calibrated to 2005 levels. Programme reports a one month stockout at national level and in 30 districts. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate follows official government estimate. Estimate challenged by: D-
- 2014: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-

# Syrian Arab Republic - DTP3

SYR - DTP3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	83	81	80	80	80	79	80	80	72	45	41	43
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	99	99	99	99	99	98	99	99	91	64	60	62
Administrative	99	99	99	99	99	98	99	99	91	64	60	62
Survey	NA	NA	77	NA	NA	82	NA	NA	NA	NA	NA	NA

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

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

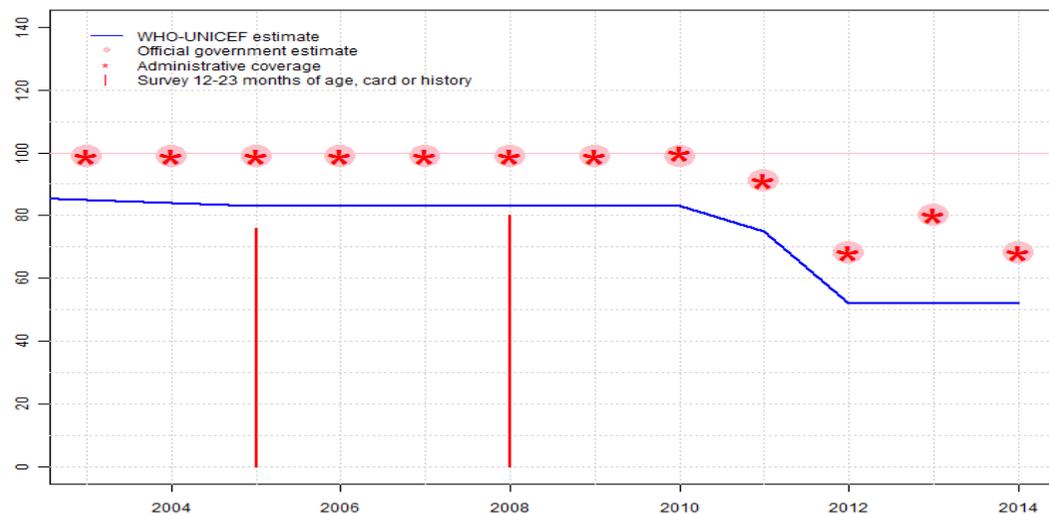
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2004: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2005: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 80 percent based on 1 survey(s). Syrian Arab Republic Multiple Indicator Cluster Survey 2006 card or history results of 77 percent modified for recall bias to 80 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 57 percent and 3d dose card only coverage of 52 percent. Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 levels. Survey results ignored. Sample size 0 less than 300. GoC=No accepted empirical data
- 2009: Reported data calibrated to 2005 levels. GoC=No accepted empirical data
- 2010: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2011: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2012: Reported data calibrated to 2005 levels. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2013: Reported data calibrated to 2005 levels. Programme reports a one month stockout at national level and in 30 districts. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2014: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-

# Syrian Arab Republic - Pol3

SYR - Pol3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	85	84	83	83	83	83	83	83	75	52	52	52
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	99	99	99	99	99	99	99	99	91	68	80	68
Administrative	99	99	99	99	99	99	99	100	91	68	80	68
Survey	NA	NA	76	NA	NA	80	NA	NA	NA	NA	NA	NA

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

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

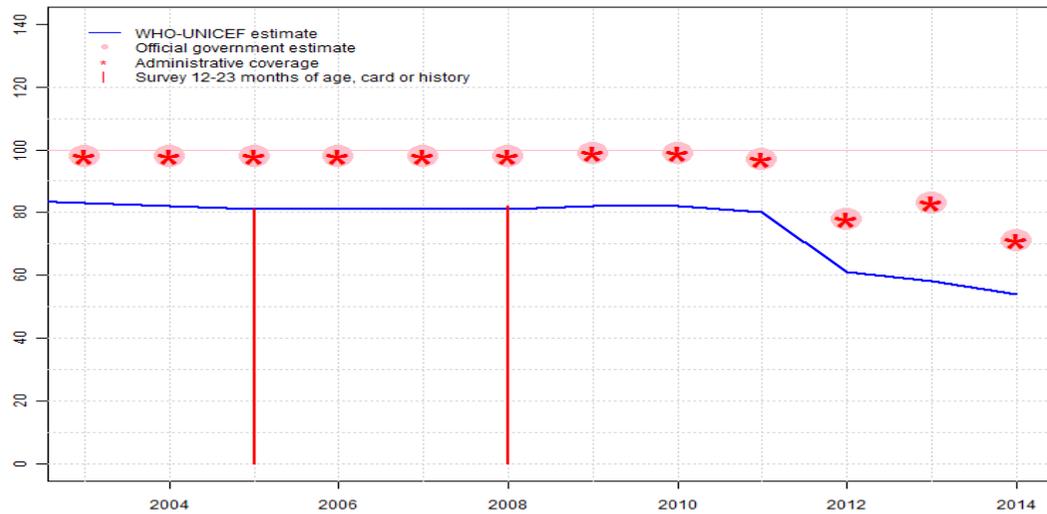
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2004: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2005: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 83 percent based on 1 survey(s). Syrian Arab Republic Multiple Indicator Cluster Survey 2006 card or history results of 76 percent modified for recall bias to 83 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 56 percent and 3d dose card only coverage of 52 percent. Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 levels. Survey results ignored. Sample size 0 less than 300. Estimate challenged by: D-
- 2009: Reported data calibrated to 2005 levels. GoC=No accepted empirical data
- 2010: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2011: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2012: Reported data calibrated to 2005 levels. Higher estimated coverage levels versus those for the third dose of DTP containing vaccine may suggest inclusion of campaign doses. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2013: Reported data calibrated to 2005 levels. Reported data excluded. Reported coverage levels may reflect doses delivered during campaign. Higher estimated coverage levels versus those for the third dose of DTP containing vaccine may suggest inclusion of campaign doses. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2014: Reported data calibrated to 2005 levels. Reported data excluded. Change in reported coverage from 80 level to 68 percent. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Higher estimated coverage levels versus those for the third dose of DTP containing vaccine may suggest inclusion of campaign doses. Estimate challenged by: D-

# Syrian Arab Republic - MCV1

SYR - MCV1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	83	82	81	81	81	81	82	82	80	61	58	54
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	98	98	98	98	98	98	99	99	97	78	83	71
Administrative	98	98	98	98	98	98	99	99	97	78	83	71
Survey	NA	NA	81	NA	NA	82	NA	NA	NA	NA	NA	NA

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

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

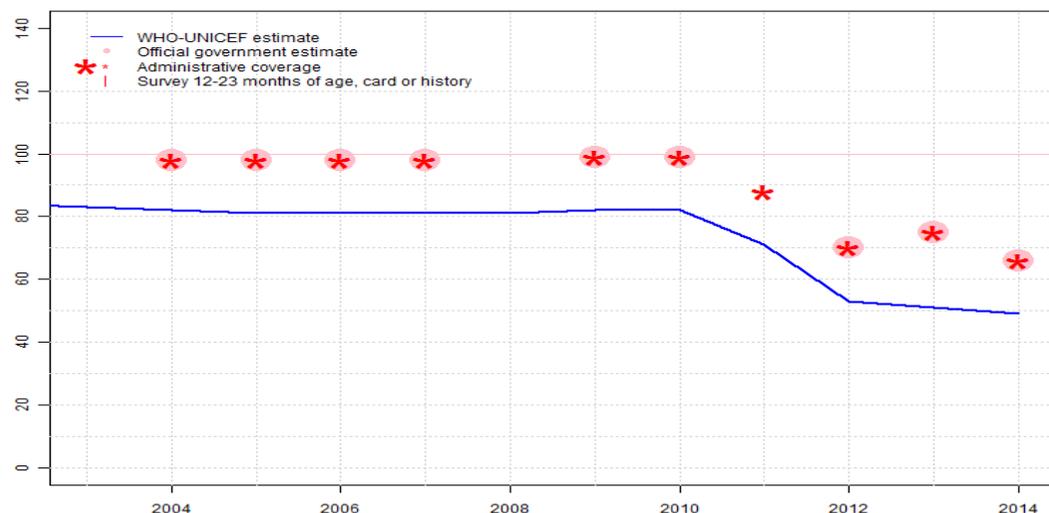
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2004: Reported data calibrated to 1997 and 2005 levels. Estimate challenged by: D-
- 2005: 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-
- 2006: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 levels. Survey results ignored. Sample size 0 less than 300. Estimate challenged by: D-
- 2009: Reported data calibrated to 2005 levels. GoC=No accepted empirical data
- 2010: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2011: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2012: Reported data calibrated to 2005 levels. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2013: Reported data calibrated to 2005 levels. Reported data excluded. Reported coverage levels may reflect doses delivered during campaign. Programme reports a 4 month stockout at the national level and in 60 districts. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate of 58 percent changed from previous revision value of 61 percent. Estimate challenged by: D-
- 2014: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage.. Estimate challenged by: D-

# Syrian Arab Republic - MCV2

SYR - MCV2



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	83	82	81	81	81	81	82	82	71	53	51	49
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	98	98	98	98	NA	99	99	NA	70	75	66
Administrative	128	98	98	98	98	NA	99	99	88	70	75	66
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: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. Reported data excluded. 128 percent greater than 100 percent. Reported data excluded. Unexplained increase from 98 percent to 128 percent with decrease 98 percent. Second dose of MCV introduced during 1993, reporting started in 1999. Estimate challenged by: D-R-
- 2004: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. Estimate challenged by: D-R-
- 2005: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. Estimate challenged by: D-R-
- 2006: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. Estimate challenged by: D-R-
- 2007: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. Estimate challenged by: D-R-
- 2008: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. GoC=No accepted empirical data
- 2009: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. Estimate challenged by: R-
- 2010: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. Estimate challenged by: D-R-
- 2011: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. Estimate challenged by: D-R-
- 2012: Coverage level follows coverage for MCV first dose with adjustment based on the difference between estimated coverage and official government estimate for MCV. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-R-
- 2013: Reported data calibrated to 2012 levels. Reported data excluded. Reported coverage levels may reflect doses delivered during campaign. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate of 51 percent changed from previous revision value

# Syrian Arab Republic - MCV2

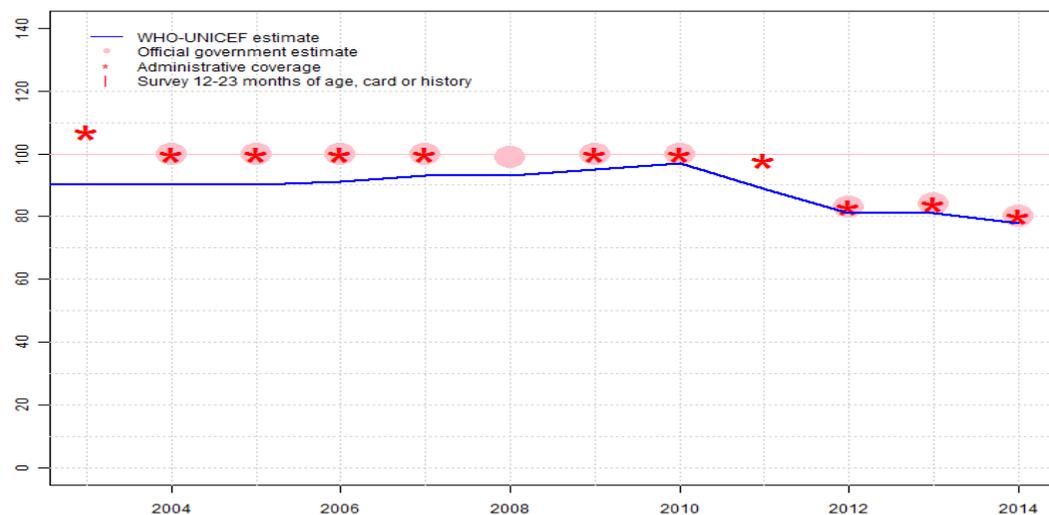
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of 58 percent. Estimate challenged by: D-

2014: Reported data calibrated to 2012 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-

# Syrian Arab Republic - HepBB

SYR - HepBB



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	90	90	90	91	93	93	95	97	89	81	81	78
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	100	100	100	100	99	100	100	NA	83	84	80
Administrative	107	100	100	100	100	NA	100	100	98	83	84	80
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:

- 2003: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Reported data excluded. 107 percent greater than 100 percent. Estimate challenged by: D-R-
- 2004: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Estimate challenged by: D-R-
- 2005: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Estimate challenged by: D-R-
- 2006: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Estimate challenged by: D-R-
- 2007: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Estimate challenged by: D-R-
- 2008: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Estimate challenged by: D-R-
- 2009: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Estimate challenged by: D-R-
- 2010: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Estimate challenged by: D-R-
- 2011: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Estimate challenged by: D-R-
- 2012: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: R-
- 2013: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: R-
- 2014: Coverage level follows coverage for HepB birth dose with adjustment based on the difference between estimated coverage and official government estimate for BCG. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. No nationally representative household survey within the last 5 years. WHO and UNICEF

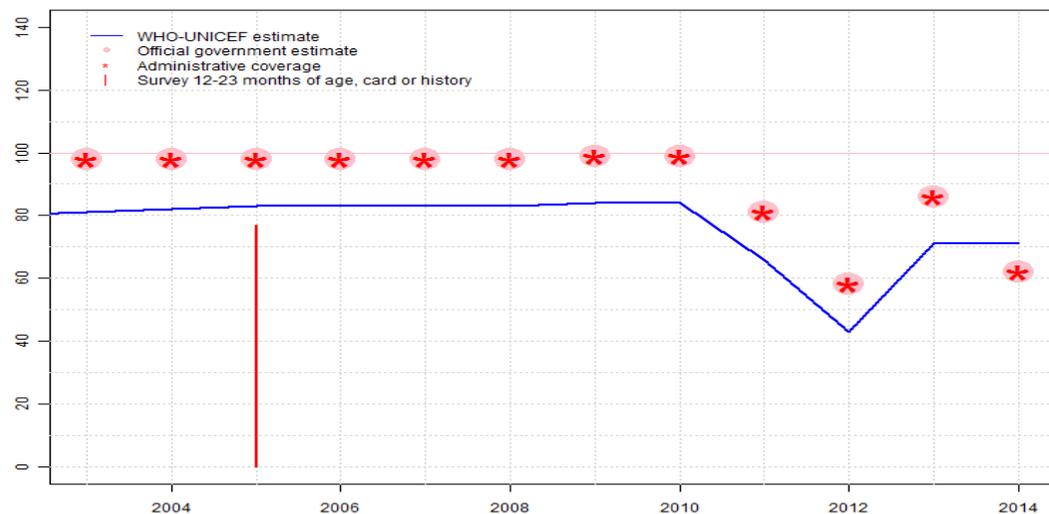
# Syrian Arab Republic - HepBB

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recommend a high-quality survey to confirm reported levels of coverage.  
Estimate challenged by: R-

# Syrian Arab Republic - HepB3

SYR - HepB3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	81	82	83	83	83	83	84	84	66	43	71	71
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	98	98	98	98	98	98	99	99	81	58	86	62
Administrative	98	98	98	98	98	98	99	99	81	58	86	62
Survey	NA	NA	77	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.

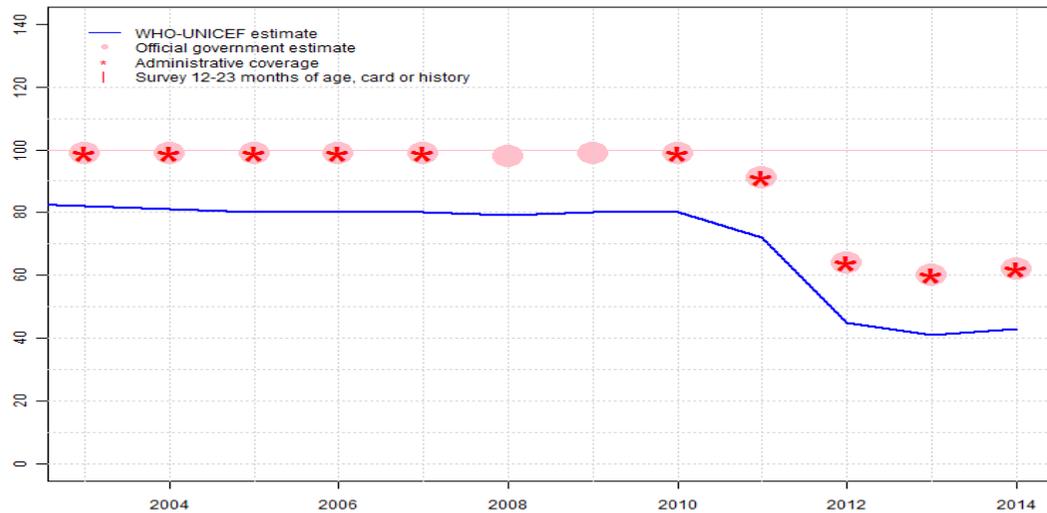
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on interpolation between 1997 and 2005 levels. Vaccine to vaccine consistency Estimate challenged by: D-R-
- 2004: Estimate based on interpolation between 1997 and 2005 levels. Vaccine to vaccine consistency Estimate challenged by: D-R-
- 2005: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 83 percent based on 1 survey(s). Syrian Arab Republic Multiple Indicator Cluster Survey 2006 card or history results of 77 percent modified for recall bias to 83 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 57 percent and 3d dose card only coverage of 53 percent. Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2009: Reported data calibrated to 2005 levels. GoC=No accepted empirical data
- 2010: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2011: Reported data calibrated to 2005 levels. Decline in coverage attributed to civil unrest in the country. Estimate challenged by: D-
- 2012: Reported data calibrated to 2005 levels. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2013: Reported data calibrated to 2005 levels. Higher levels of HepB3 due in part to use of monovalent HepB vaccine. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2014: Reported data calibrated to 2005 levels. Reported data excluded. Decline in reported coverage from 86 level to 62 percent. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Consistency with other vaccines.

# Syrian Arab Republic - Hib3

SYR - Hib3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	82	81	80	80	80	79	80	80	72	45	41	43
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	99	99	99	99	99	98	99	99	91	64	60	62
Administrative	99	99	99	99	99	NA	NA	99	91	64	60	62
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.

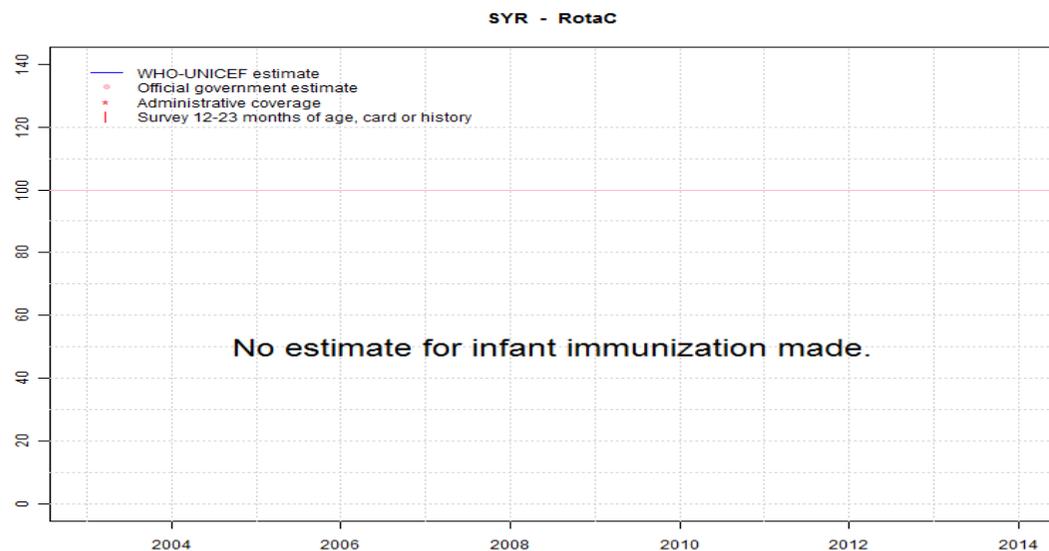
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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:

- 2003: Estimated immunization coverage levels are based on DTP3 estimates. Estimate challenged by: R-
- 2004: Estimated immunization coverage levels are based on DTP3 estimates. Estimate challenged by: D-R-
- 2005: Estimated immunization coverage levels are based on DTP3 estimates. Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2007: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 levels. GoC=No accepted empirical data
- 2009: Reported data calibrated to 2005 levels. GoC=No accepted empirical data
- 2010: Reported data calibrated to 2005 levels. GoC=No accepted empirical data
- 2011: Reported data calibrated to 2005 levels. Estimate challenged by: D-
- 2012: Reported data calibrated to 2005 levels. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2013: Reported data calibrated to 2005 levels. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2014: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Consistency with other vaccines.

# Syrian Arab Republic - RotaC



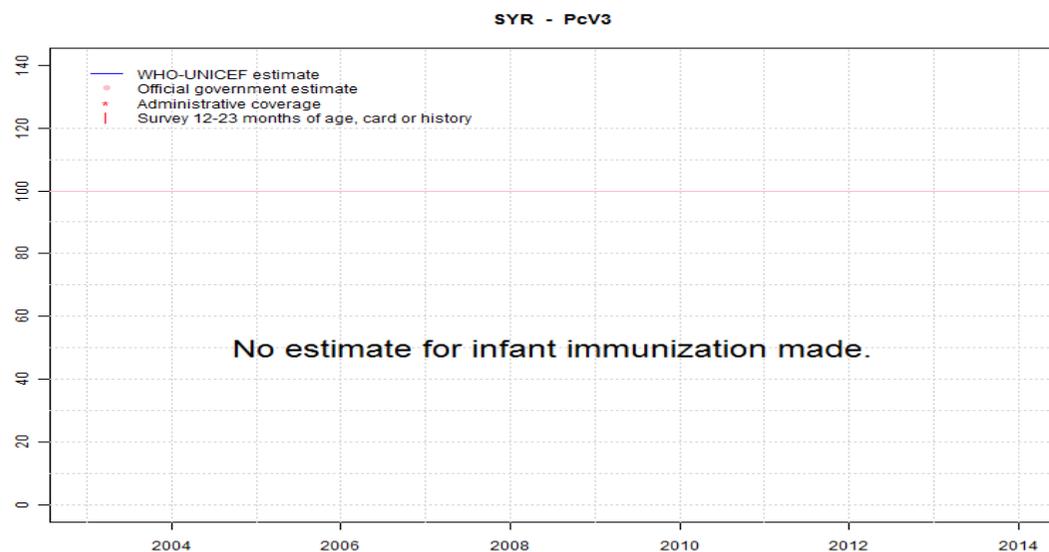
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA											
Estimate GoC	NA											
Official	NA											
Administrative	NA											
Survey	NA											

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.

# Syrian Arab Republic - 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.

# Syrian Arab Republic - survey details

## 2008 Syria 2009 Household Survey (PAPFAM)

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	92	12-23 m	-	66
DTP1	Card or History	88	12-23 m	-	66
DTP3	Card or History	82	12-23 m	-	66
MCV1	Card or History	82	12-23 m	-	66
Pol1	Card or History	87	12-23 m	-	66
Pol3	Card or History	80	12-23 m	-	66

DTP3	C or H <12 months	74	12-23 m	2083	55
DTP3	Card	52	12-23 m	2083	55
DTP3	Card or History	77	12-23 m	2083	55
DTP3	History	24	12-23 m	2083	55
HepB1	C or H <12 months	89	12-23 m	2083	55
HepB1	Card	57	12-23 m	2083	55
HepB1	Card or History	89	12-23 m	2083	55
HepB1	History	31	12-23 m	2083	55
HepB3	C or H <12 months	71	12-23 m	2083	55
HepB3	Card	53	12-23 m	2083	55
HepB3	Card or History	77	12-23 m	2083	55
HepB3	History	24	12-23 m	2083	55
MCV1	C or H <12 months	74	12-23 m	2083	55
MCV1	Card	52	12-23 m	2083	55
MCV1	Card or History	81	12-23 m	2083	55
MCV1	History	29	12-23 m	2083	55
Pol1	C or H <12 months	88	12-23 m	2083	55
Pol1	Card	56	12-23 m	2083	55
Pol1	Card or History	89	12-23 m	2083	55
Pol1	History	33	12-23 m	2083	55
Pol3	C or H <12 months	74	12-23 m	2083	55
Pol3	Card	52	12-23 m	2083	55
Pol3	Card or History	76	12-23 m	2083	55
Pol3	History	24	12-23 m	2083	55

## 2005 Syrian Arab Republic Multiple Indicator Cluster Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	90	12-23 m	2083	55
BCG	Card	57	12-23 m	2083	55
BCG	Card or History	90	12-23 m	2083	55
BCG	History	33	12-23 m	2083	55
DTP1	C or H <12 months	88	12-23 m	2083	55
DTP1	Card	57	12-23 m	2083	55
DTP1	Card or History	88	12-23 m	2083	55
DTP1	History	31	12-23 m	2083	55

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)

## Syrian Arab Republic

### 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	92
2004	91
2005	92
2006	93
2007	92
2008	94
2009	94
2010	94
2011	94
2012	94
2013	94
2014	92

<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.