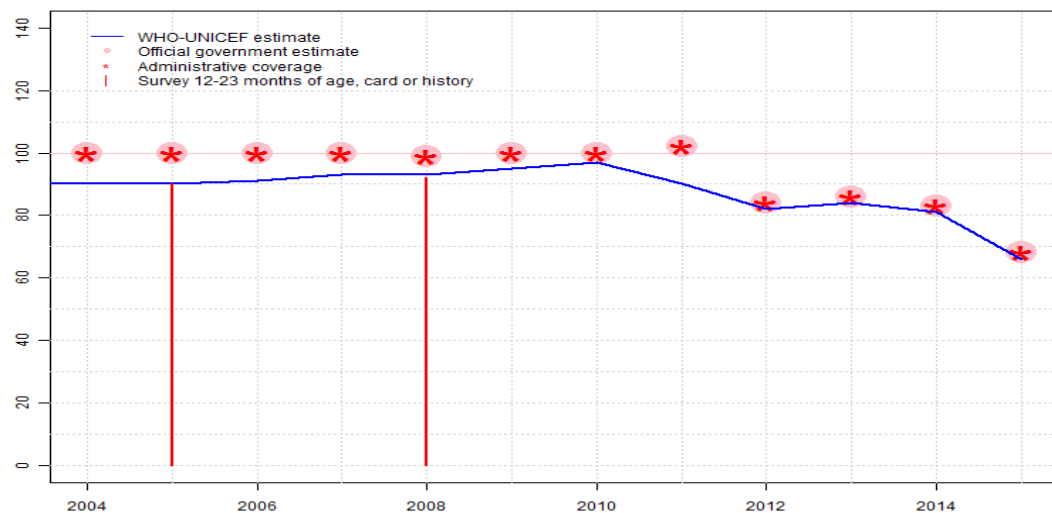


# Syrian Arab Republic - BCG

SYR - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	90	90	91	93	93	95	97	90	82	84	81	66
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	100	100	100	100	99	100	100	102	84	86	83	68
Administrative	100	100	100	100	99	100	100	102	84	86	83	68
Survey	NA	90	NA	NA	92	NA	NA	NA	NA	NA	NA	NA

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

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

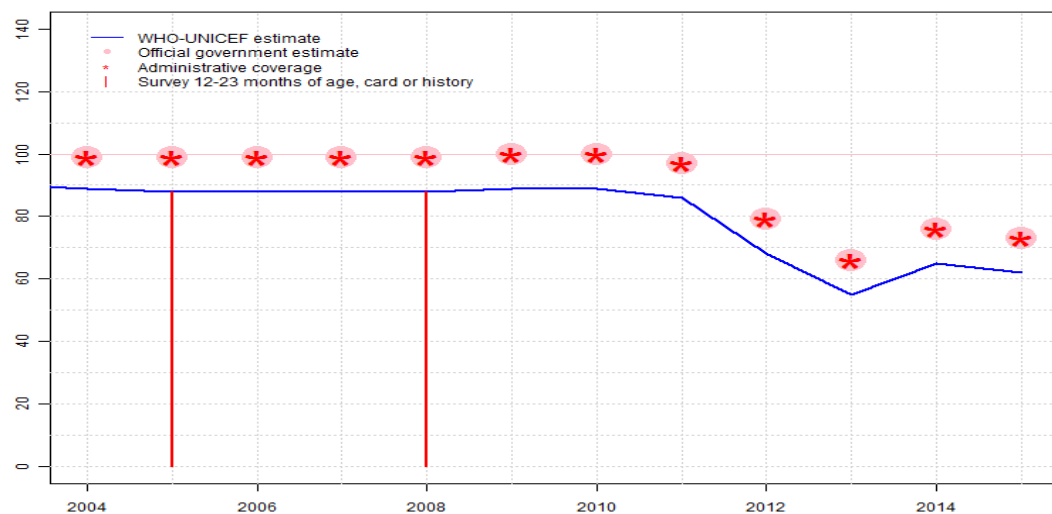
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Reported data calibrated to 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. GoC=Assigned by working group. Consistent with other vaccines.
- 2015: Reported data calibrated to 2011 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015. Programme reports three month national level stock-out. Estimate challenged by: D-

# Syrian Arab Republic - DTP1

SYR - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	89	88	88	88	88	89	89	86	68	55	65	62
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	99	99	99	99	99	100	100	97	79	66	76	73
Administrative	99	99	99	99	99	100	100	97	79	66	76	73
Survey	NA	88	NA	NA	88	NA	NA	NA	NA	NA	NA	NA

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

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

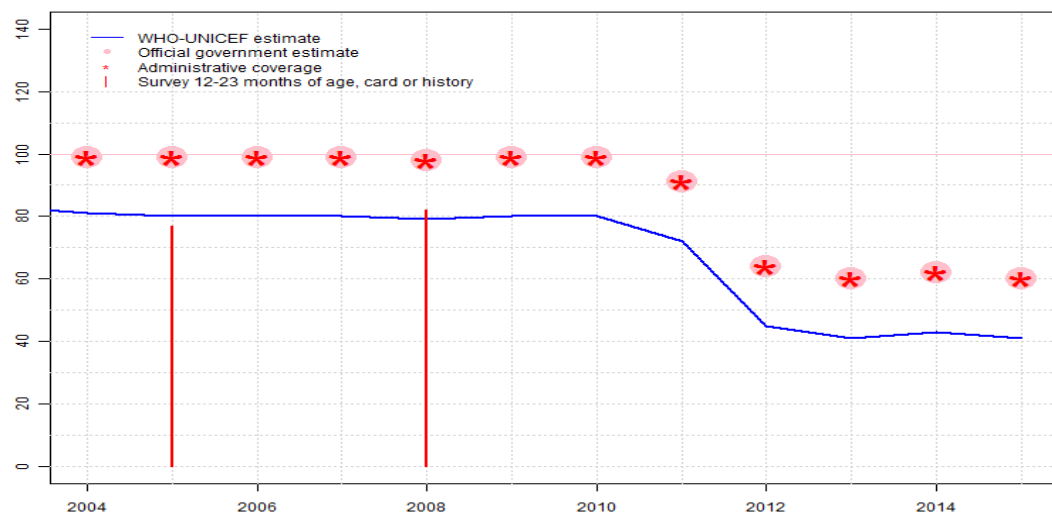
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Reported data calibrated to 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. Estimate challenged by: D-
- 2015: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015. Estimate challenged by: D-

# Syrian Arab Republic - DTP3

SYR - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	81	80	80	80	79	80	80	72	45	41	43	41
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	99	99	99	99	98	99	99	91	64	60	62	60
Administrative	99	99	99	99	98	99	99	91	64	60	62	60
Survey	NA	77	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.

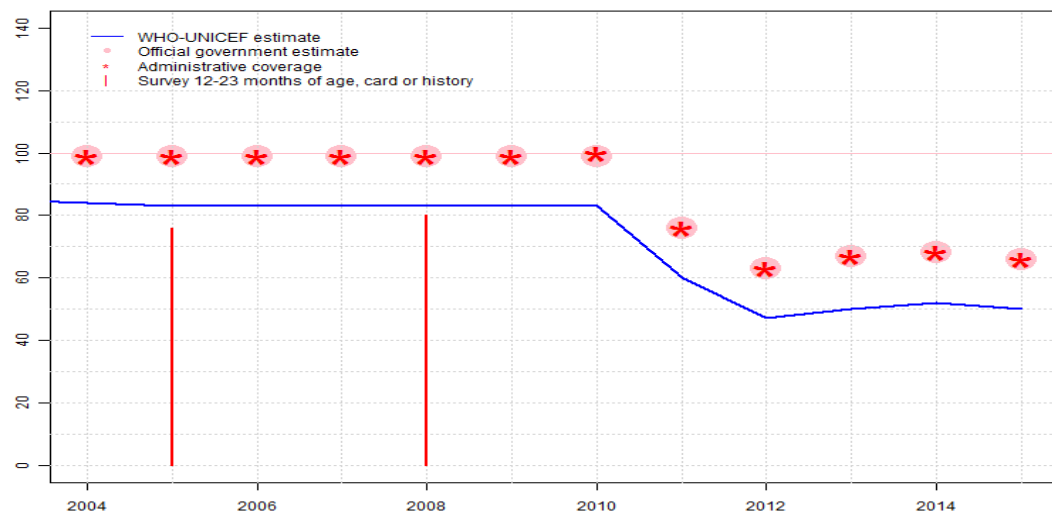
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: 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. Estimate challenged by: D-
- 2015: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015. Estimate challenged by: D-

# Syrian Arab Republic - Pol3

SYR - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	84	83	83	83	83	83	83	60	47	50	52	50
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	99	99	99	99	99	99	99	76	63	67	68	66
Administrative	99	99	99	99	99	99	100	76	63	67	68	66
Survey	NA	76	NA	NA	80	NA	NA	NA	NA	NA	NA	NA

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

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

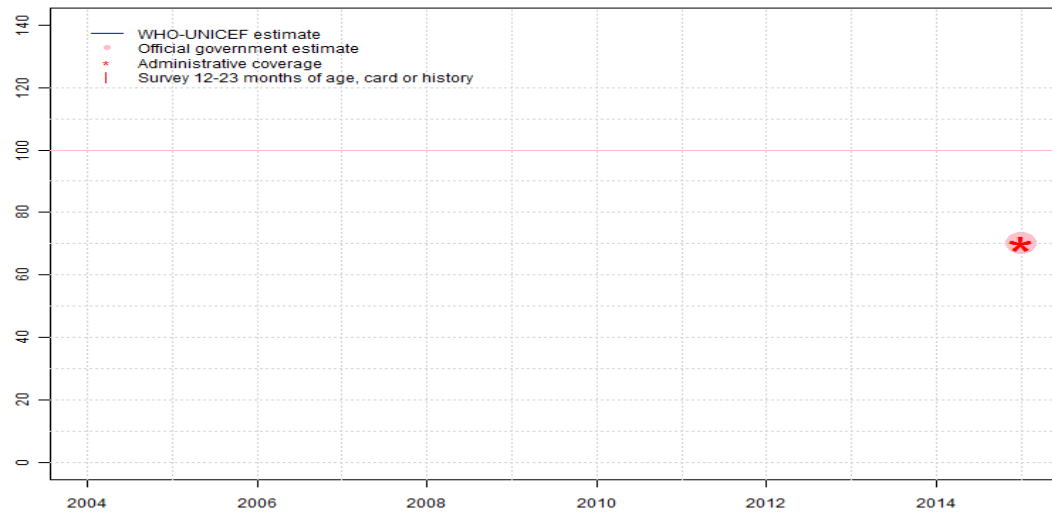
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Reported data calibrated to 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 of 60 percent changed from previous revision value of 75 percent. 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 of 47 percent changed from previous revision value of 52 percent. 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 of 50 percent changed from previous revision value of 52 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. Higher estimated coverage levels versus those for the third dose of DTP containing vaccine may suggest inclusion of campaign doses. Estimate challenged by: D-
- 2015: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015. Estimate challenged by: D-

# Syrian Arab Republic - IPV1

SYR - IPV1



## Description:

2015: IPV introduced in 2008 as part of a sequential schedule. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015. Estimate challenged by: D-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	59
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

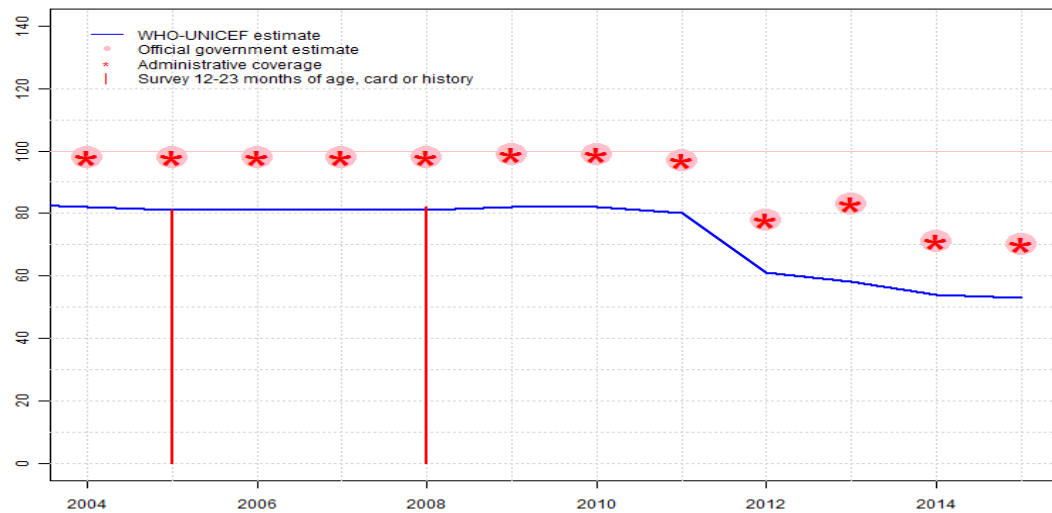
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

# Syrian Arab Republic - MCV1

SYR - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	82	81	81	81	81	82	82	80	61	58	54	53
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	98	98	98	98	98	99	99	97	78	83	71	70
Administrative	98	98	98	98	98	99	99	97	78	83	71	70
Survey	NA	81	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.

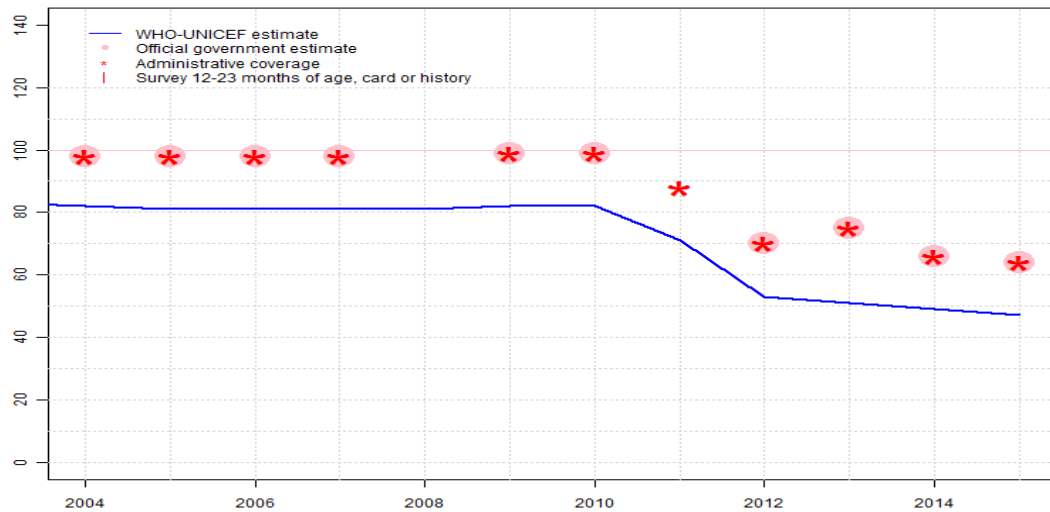
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: 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 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.. Estimate challenged by: D-
- 2015: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015. Estimate challenged by: D-

# Syrian Arab Republic - MCV2

SYR - MCV2



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	82	81	81	81	81	82	82	71	53	51	49	47
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	98	98	98	98	NA	99	99	NA	70	75	66	64
Administrative	98	98	98	98	NA	99	99	88	70	75	66	64
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

## Description:

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

- 2004: 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 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. Estimate challenged by: D-
- 2015: Reported data calibrated to 2012 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained



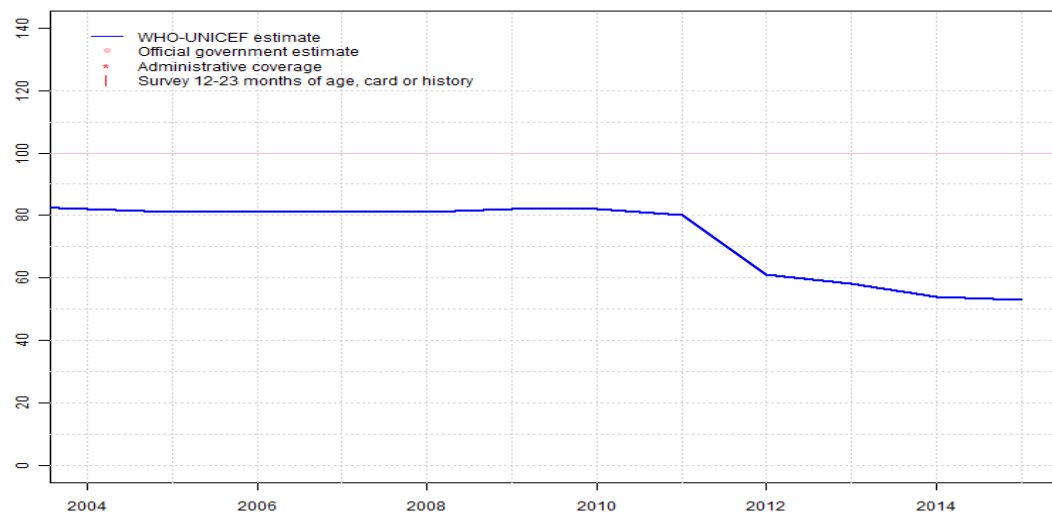
# Syrian Arab Republic - MCV2

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largely unchanged during the period of civil unrest between 2014 and 2015.  
Estimate challenged by: D-

# Syrian Arab Republic - RCV1

SYR - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	82	81	81	81	81	82	82	80	61	58	54	53
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.

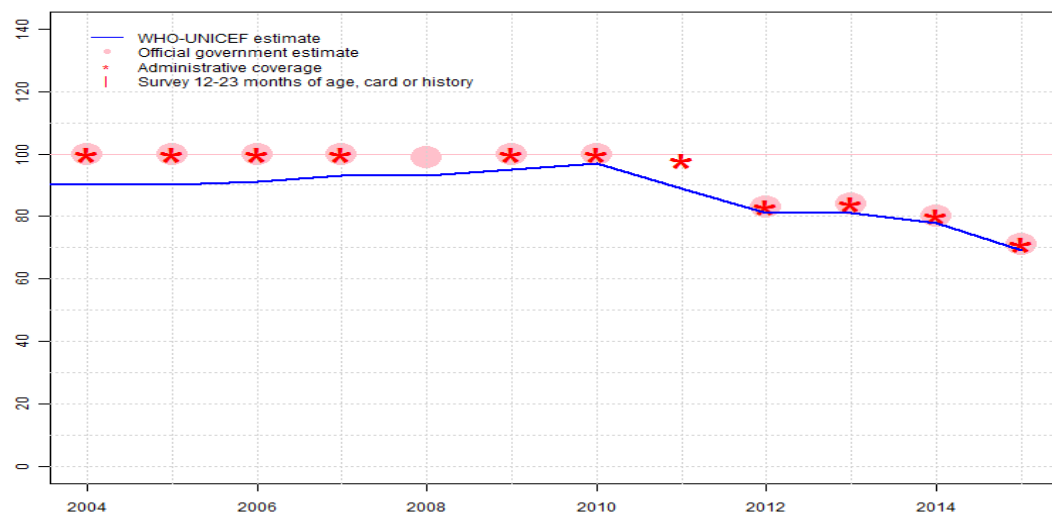
## Description:

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. Estimate challenged by: D-
- 2005: Estimate based on estimated MCV1. Estimate challenged by: D-R-
- 2006: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2007: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2008: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2009: Estimate based on estimated MCV1. GoC=No accepted empirical data
- 2010: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2011: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2012: Estimate based on estimated MCV1. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2013: Estimate based on estimated MCV1. Low levels of coverage associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2014: Estimate based on estimated MCV1. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Estimate challenged by: D-
- 2015: Estimate based on estimated MCV1. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015. Estimate challenged by: D-

# Syrian Arab Republic - HepBB

SYR - HepBB



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	90	90	91	93	93	95	97	89	81	81	78	69
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	100	100	100	100	99	100	100	NA	83	84	80	71
Administrative	100	100	100	100	NA	100	100	98	83	84	80	71
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: 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: D-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: D-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. Estimate challenged by: D-R-
- 2015: Reported data calibrated to 2014 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015.

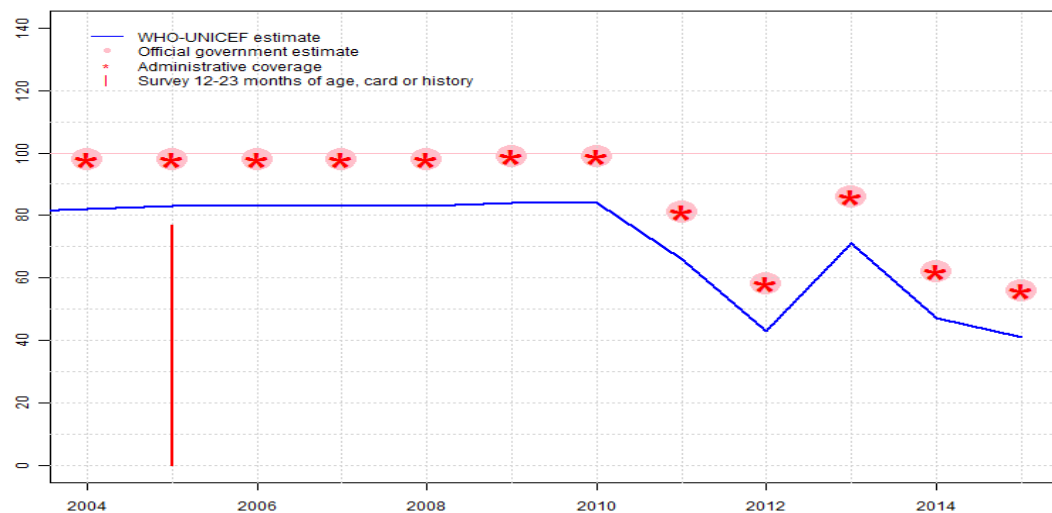
# Syrian Arab Republic - HepBB

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Estimate challenged by: D-

# Syrian Arab Republic - HepB3

SYR - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	82	83	83	83	83	84	84	66	43	71	47	41
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	98	98	98	98	98	99	99	81	58	86	62	56
Administrative	98	98	98	98	98	99	99	81	58	86	62	56
Survey	NA	77	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.

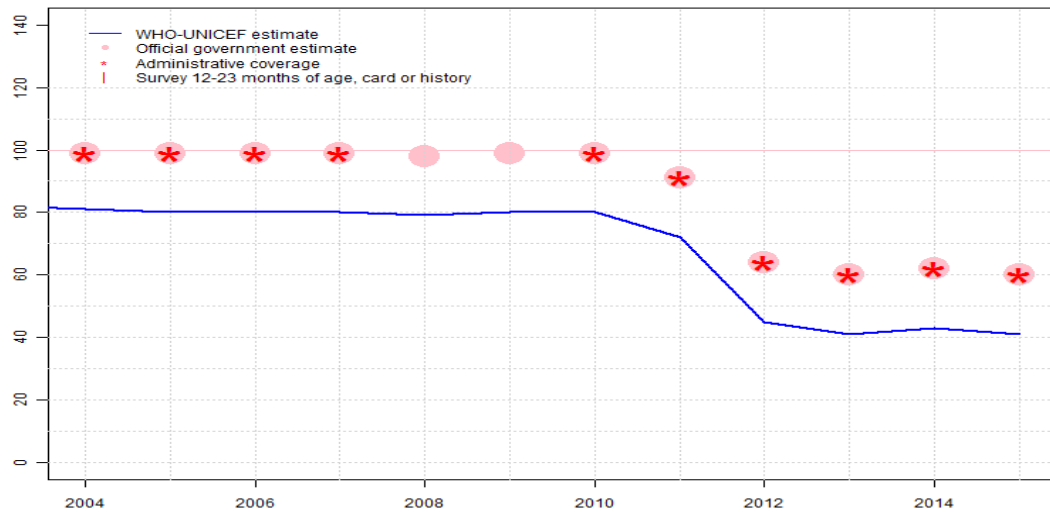
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on interpolation between 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. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Estimate of 47 percent changed from previous revision value of 71 percent. GoC=Assigned by working group. Consistency with other vaccines.
- 2015: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015. Estimate challenged by: D-

# Syrian Arab Republic - Hib3

SYR - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	81	80	80	80	79	80	80	72	45	41	43	41
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	99	99	99	99	98	99	99	91	64	60	62	60
Administrative	99	99	99	99	NA	NA	99	91	64	60	62	60
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.

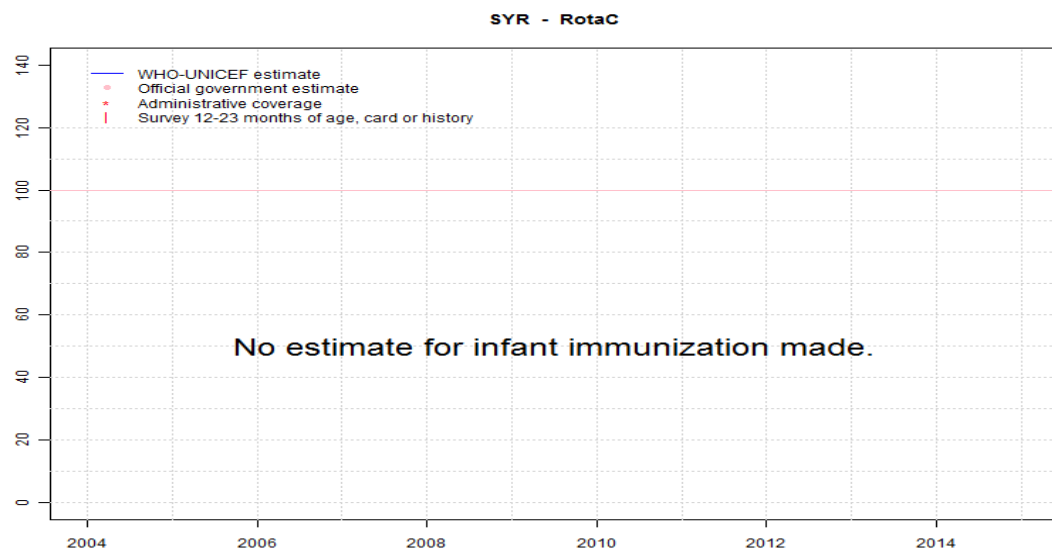
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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: 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. GoC=Assigned by working group. Consistency with other vaccines.
- 2015: Reported data calibrated to 2005 levels. Low levels of coverage continue associated with the interruption of health services during period of civil unrest. Reported target population estimates have exceptionally remained largely unchanged during the period of civil unrest between 2014 and 2015. Estimate challenged by: D-

# Syrian Arab Republic - RotaC



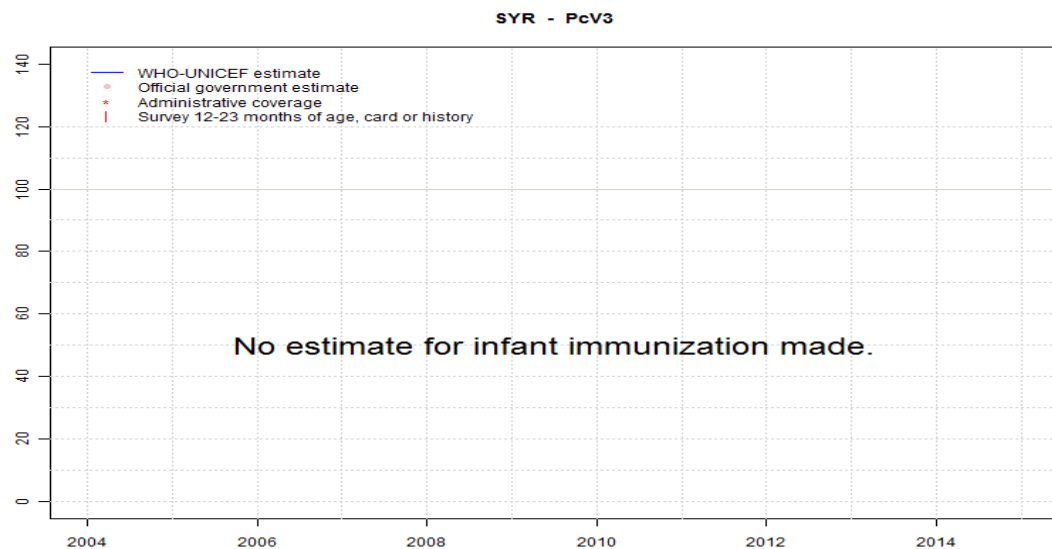
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

# Syrian Arab Republic - PcV3



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

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

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

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



# 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

## 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

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

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 (%)
2004	91
2005	92
2006	93
2007	92
2008	94
2009	94
2010	94
2011	94
2012	94
2013	94
2014	92
2015	91

<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.