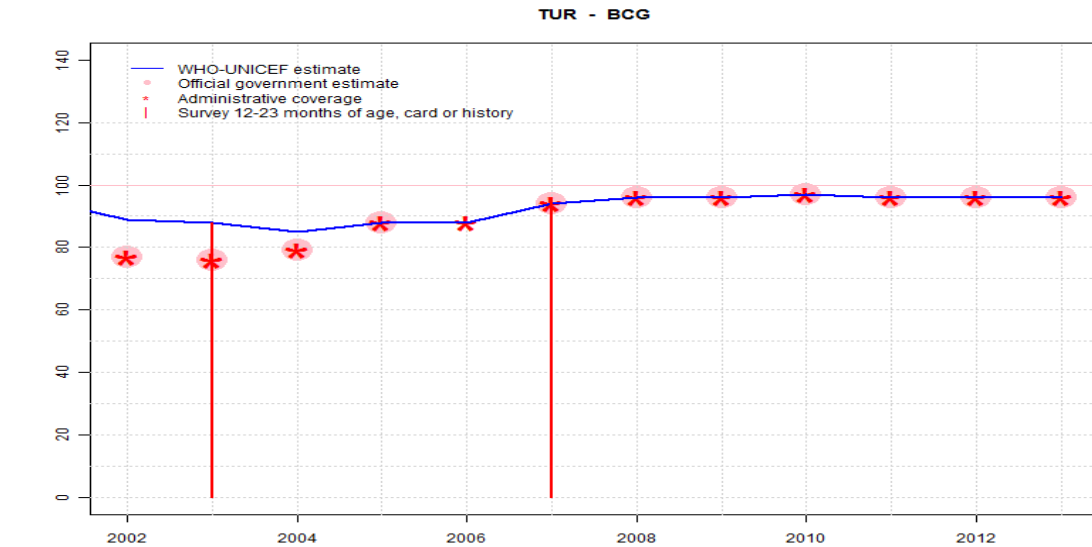


# Turkey - BCG



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	89	88	85	88	88	94	96	96	97	96	96	96
Estimate GoC	•	•	••	•••	•••	•••	•••	•••	••	••	••	••
Official	77	76	79	88	NA	94	96	96	97	96	96	96
Administrative	77	76	79	88	88	94	96	96	97	96	96	96
Survey	NA	88	NA	NA	NA	96	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.

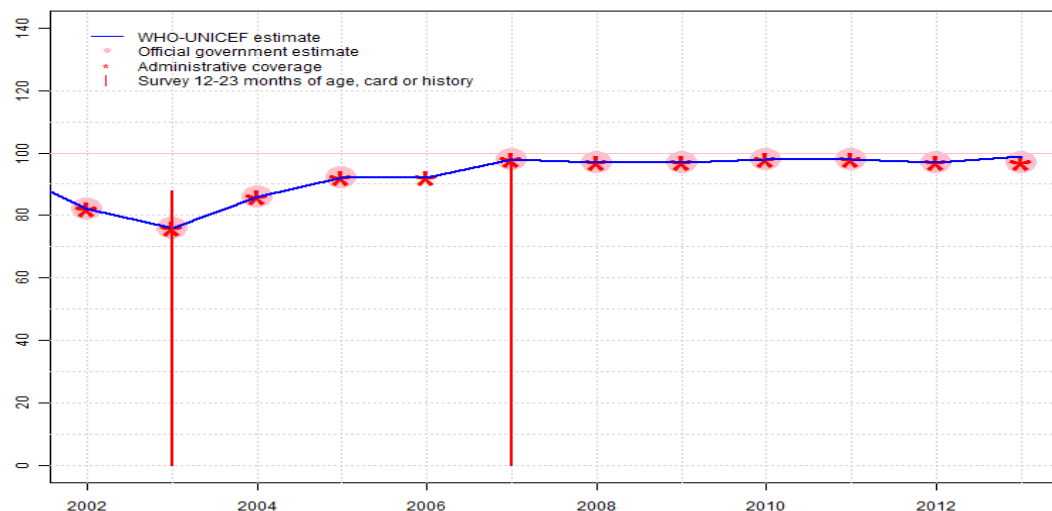
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2002: Reported data calibrated to 1997 and 2003 levels. Estimate challenged by: D-
- 2003: 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-
- 2004: Reported data calibrated to 2003 and 2005 levels. GoC=S+ D+
- 2005: From 2005 onward survey results support reported data. GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. 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=R+ D+

# Turkey - DTP1

TUR - DTP1



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	82	76	86	92	92	98	97	97	98	98	97	99
Estimate GoC	●●●	●●	●●●	●●●	●●●	●●●	●●●	●●●	●●	●●	●●	●
Official	82	76	86	92	NA	98	97	97	98	98	97	97
Administrative	82	76	86	92	92	98	97	97	98	98	97	97
Survey	NA	88	NA	NA	NA	97	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.

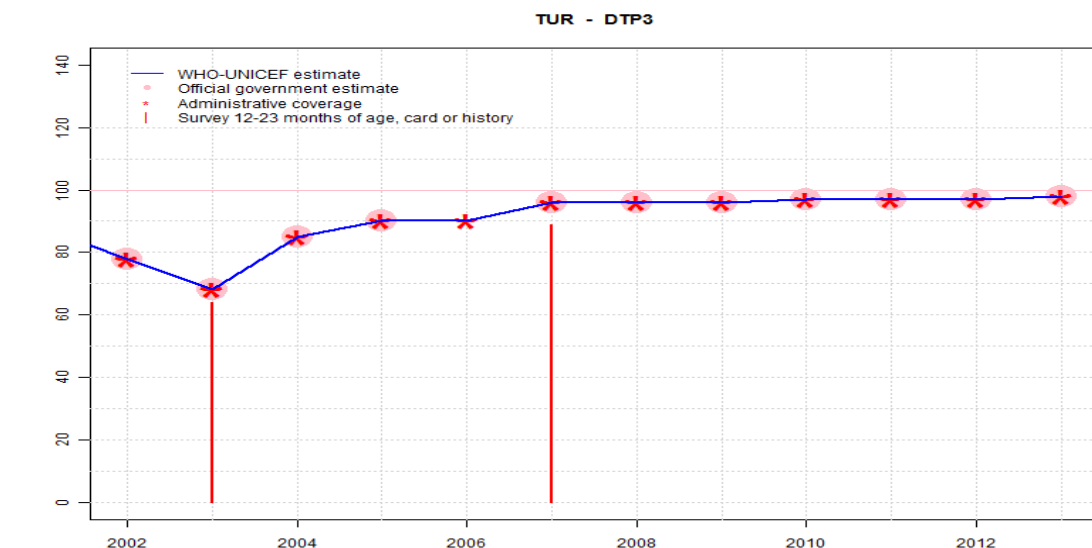
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2002: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2003: Survey results support reported data GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. Estimate of 97 percent changed from previous revision value of 98 percent. GoC=R+ D+
- 2013: DTP1 coverage estimated based on DTP3 coverage of 98. 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: R-

# Turkey - DTP3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	78	68	85	90	90	96	96	96	97	97	97	98
Estimate GoC	•••	••	•••	•••	•••	•••	•	•••	••	••	••	••
Official	78	68	85	90	NA	96	96	96	97	97	97	98
Administrative	78	68	85	90	90	96	96	96	97	97	97	98
Survey	NA	64	NA	NA	NA	89	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.

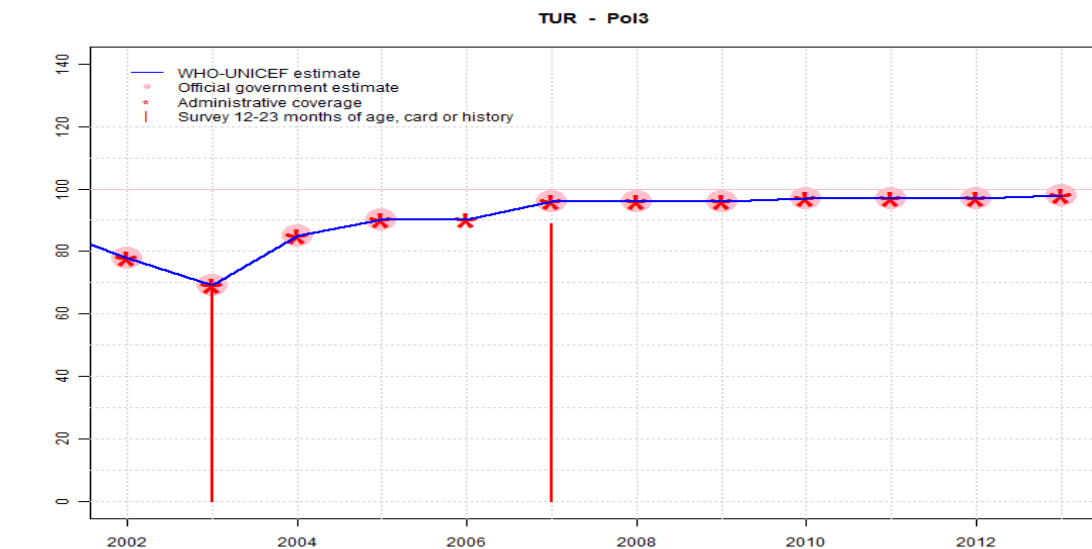
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2002: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2003: Survey results support reported data Turkey Demographic and Health Survey 2003 card or history results of 64 percent modified for recall bias to 81 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 52 percent and 3d dose card only coverage of 48 percent. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). Turkey Demographic and Health Survey 2008 card or history results of 89 percent modified for recall bias to 96 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 71 percent. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. 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=R+ D+

# Turkey - Pol3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	78	69	85	90	90	96	96	96	97	97	97	98
Estimate GoC	•••	••	•••	•••	•••	•••	•	•••	••	••	••	••
Official	78	69	85	90	NA	96	96	96	97	97	97	98
Administrative	78	69	85	90	90	96	96	96	97	97	97	98
Survey	NA	69	NA	NA	NA	89	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.

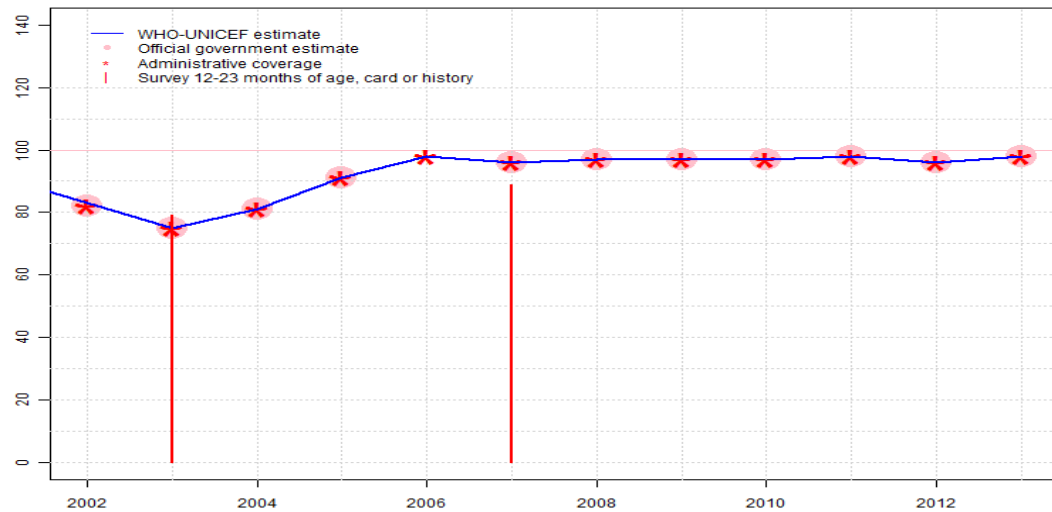
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2003: Survey results support reported data Turkey Demographic and Health Survey 2003 card or history results of 69 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 52 percent and 3d dose card only coverage of 48 percent. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Turkey Demographic and Health Survey 2008 card or history results of 89 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 70 percent. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. 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=R+ D+

# Turkey - MCV

TUR - MCV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	83	75	81	91	98	96	97	97	97	98	96	98
Estimate GoC	••	•••	•••	•••	•	•••	•••	•••	••	••	••	••
Official	82	75	81	91	NA	96	97	97	97	98	96	98
Administrative	82	75	81	91	98	96	97	97	97	98	96	98
Survey	NA	79	NA	NA	NA	89	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.

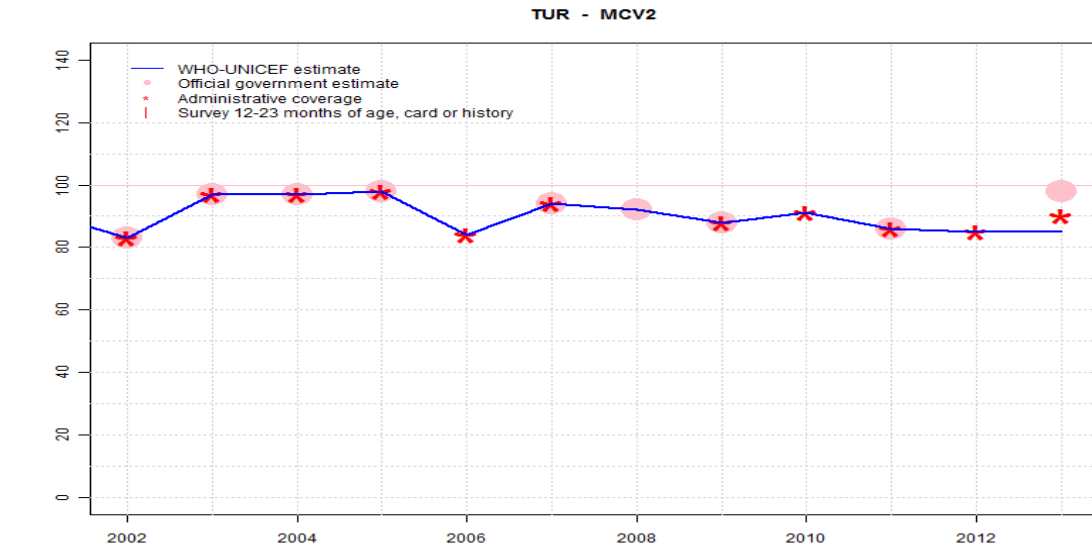
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2002: Reported data calibrated to 1997 and 2003 levels. GoC=S+ D+
- 2003: Survey results support reported data GoC=R+ S+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on reported administrative data. Estimate challenged by: D-
- 2007: In 2006 the recommended age for measles immunization was changed to 12 months of age. The survey results for children 12-23 months of age under-represented coverage GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. Estimate of 96 percent changed from previous revision value of 98 percent. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. 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=R+ D+

# Turkey - MCV2



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	83	97	97	98	84	94	92	88	91	86	85	85
Estimate GoC	••	••	••	••	••	••	••	••	••	••	••	•
Official	83	97	97	98	NA	94	92	88	NA	86	NA	98
Administrative	83	97	97	98	84	94	NA	88	91	86	85	90
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: 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.

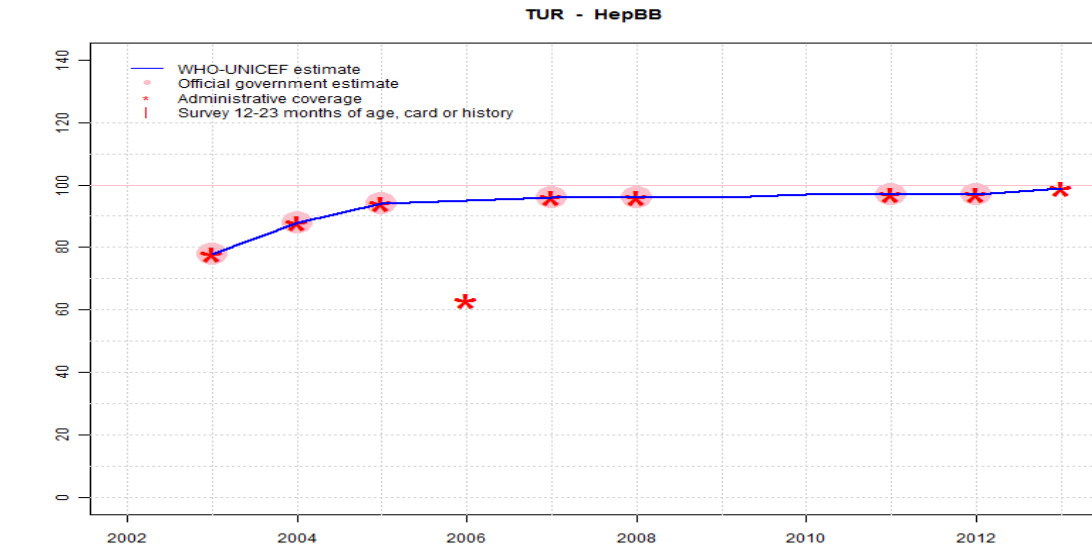
## Description:

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

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on reported administrative estimate. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on reported administrative estimate. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on reported administrative estimate. GoC=R+ D+
- 2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Change in reported coverage from 85 level to 98 percent. 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-



# Turkey - HepBB



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	78	88	94	95	96	96	96	97	97	97	99
Estimate GoC	NA	●●	●●	●●	●	●●	●●	●	●	●●	●●	●●
Official	NA	78	88	94	NA	96	96	NA	NA	97	97	NA
Administrative	NA	78	88	94	63	96	96	NA	NA	97	97	99
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 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.

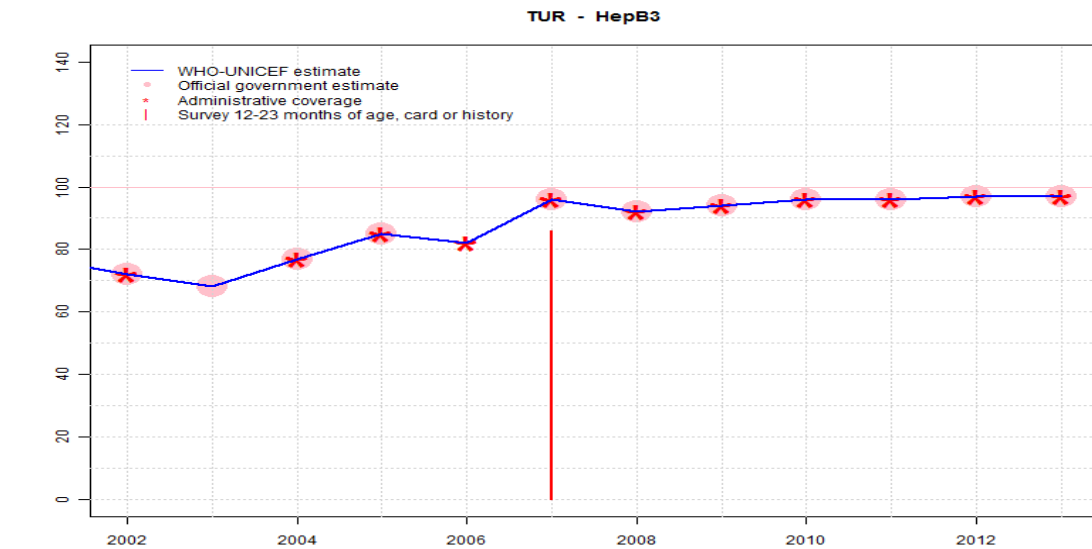
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on interpolation between reported values. Reported data excluded. Decline in reported coverage from 94 percent to 63 percent with increase to 96 percent. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2010: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on reported administrative estimate. 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=R+ D+



# Turkey - HepB3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	72	68	77	85	82	96	92	94	96	96	97	97
Estimate GoC	••	••	••	•••	••	•••	•••	•••	••	••	••	••
Official	72	68	77	85	NA	96	92	94	96	96	97	97
Administrative	72	NA	77	85	82	96	92	94	96	96	97	97
Survey	NA	NA	NA	NA	NA	86	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.

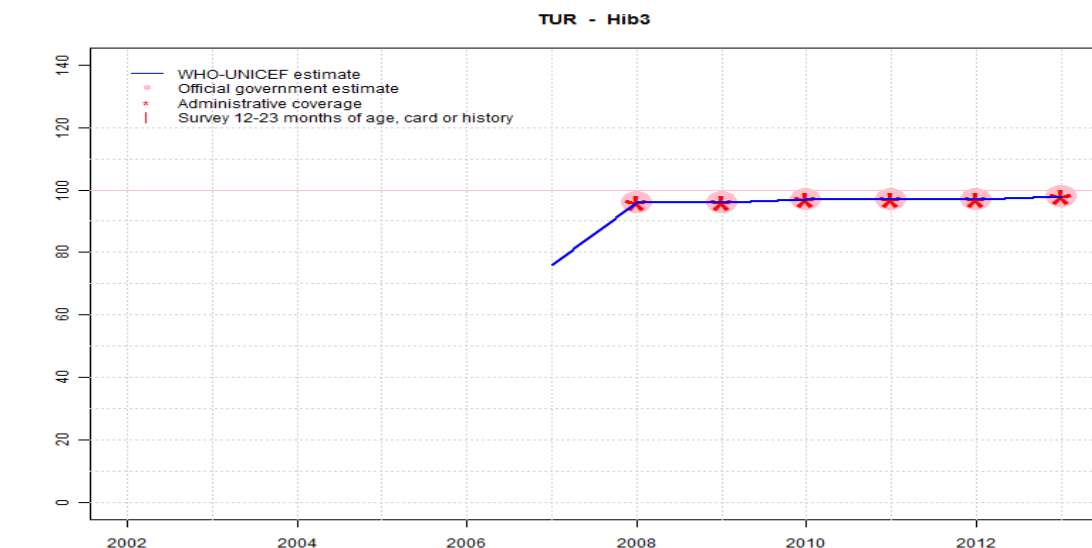
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2002: Estimate based on reported data. GoC=R+ D+
- 2003: Estimate based on reported data. GoC=R+
- 2004: Estimate based on reported data. GoC=R+ D+
- 2005: Estimate based on reported data. GoC=R+ S+ D+
- 2006: Estimate based on reported data. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). Turkey Demographic and Health Survey 2008 card or history results of 86 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 70 percent. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. Estimate of 97 percent changed from previous revision value of 96 percent. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. 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=R+ D+

# Turkey - Hib3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	76	96	96	97	97	97	98
Estimate GoC	NA	NA	NA	NA	NA	••	•	••	••	••	••	••
Official	NA	NA	NA	NA	NA	NA	96	96	97	97	97	98
Administrative	NA	NA	NA	NA	NA	NA	96	96	97	97	97	98
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

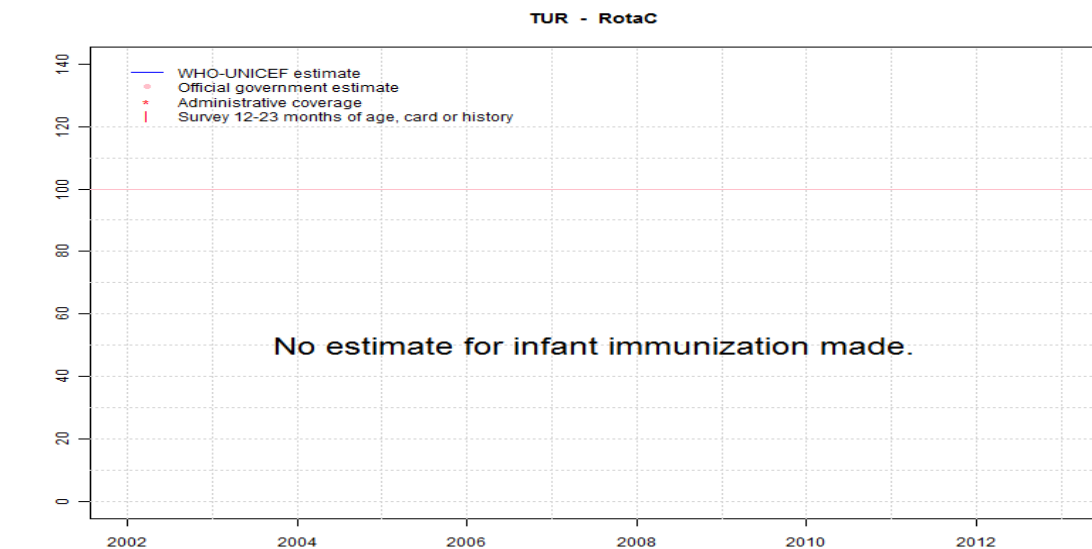
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2007: Hib vaccine introduced in 2006. 91 percent coverage achieved during the last 10 months of 2007. Hib vaccine introduced in 2006. Reporting started in 2007. GoC=D+
- 2008: Hib vaccine introduced in 2006 and full coverage achieved in 2008. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. 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=R+ D+

# Turkey - RotaC



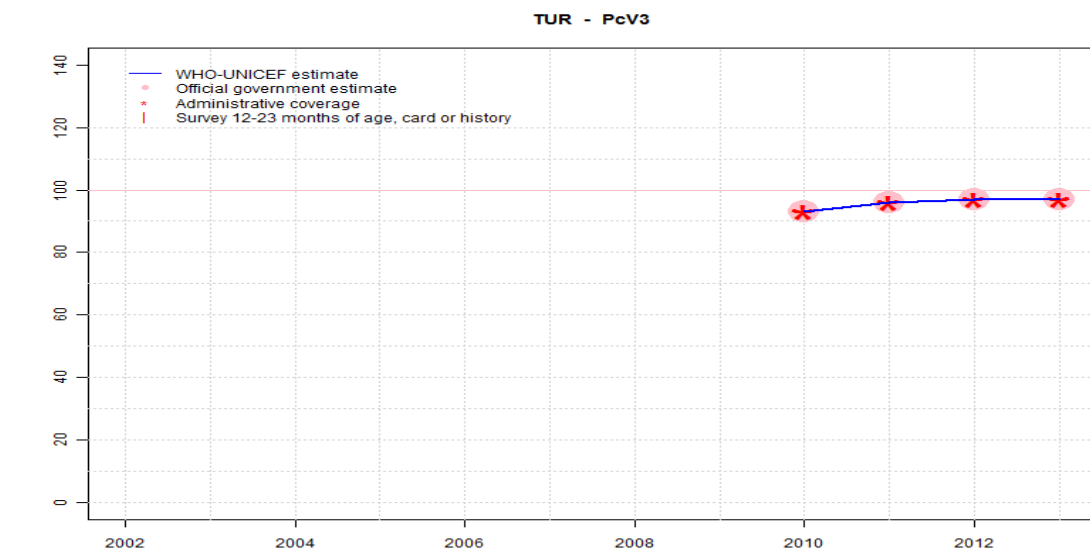
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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: 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.

# Turkey - PcV3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	93	96	97	97
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	●●	●●	●●	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	93	96	97	97
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	93	96	97	97
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 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:

- 2010: Estimate based on coverage reported by national government. Pneumococcal conjugate vaccine was introduced in 2008. GoC=R+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. Estimate of 97 percent changed from previous revision value of 96 percent. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. 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=R+ D+

# Turkey - survey details

## 2007 Turkey Demographic and Health Survey 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <15 months	96	15-26 m	711	73
BCG	Card	71	15-26 m	711	73
BCG	Card or History	96	15-26 m	711	73
BCG	History	25	15-26 m	711	73
DTP1	C or H <15 months	96	15-26 m	711	73
DTP1	Card	72	15-26 m	711	73
DTP1	Card or History	97	15-26 m	711	73
DTP1	History	25	15-26 m	711	73
DTP3	C or H <15 months	85	15-26 m	711	73
DTP3	Card	71	15-26 m	711	73
DTP3	Card or History	89	15-26 m	711	73
DTP3	History	18	15-26 m	711	73
HepB1	C or H <15 months	96	15-26 m	711	73
HepB1	Card	72	15-26 m	711	73
HepB1	Card or History	96	15-26 m	711	73
HepB1	History	24	15-26 m	711	73
HepB3	C or H <15 months	84	15-26 m	711	73
HepB3	Card	70	15-26 m	711	73
HepB3	Card or History	86	15-26 m	711	73
HepB3	History	16	15-26 m	711	73
MCV	C or H <15 months	86	15-26 m	711	73
MCV	Card	66	15-26 m	711	73
MCV	Card or History	89	15-26 m	711	73
MCV	History	23	15-26 m	711	73
Pol1	C or H <15 months	96	15-26 m	711	73
Pol1	Card	72	15-26 m	711	73
Pol1	Card or History	97	15-26 m	711	73
Pol1	History	25	15-26 m	711	73
Pol3	C or H <15 months	85	15-26 m	711	73
Pol3	Card	70	15-26 m	711	73
Pol3	Card or History	89	15-26 m	711	73
Pol3	History	19	15-26 m	711	73

## 2003 Turkey Demographic and Health Survey 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	86	12-23 m	749	54
BCG	Card	52	12-23 m	749	54
BCG	Card or history	88	12-23 m	749	54
BCG	History	36	12-23 m	749	54
DTP1	C or H <12 months	87	12-23 m	749	54
DTP1	Card	52	12-23 m	749	54
DTP1	Card or history	88	12-23 m	749	54
DTP1	History	37	12-23 m	749	54
DTP3	C or H <12 months	62	12-23 m	749	54
DTP3	Card	48	12-23 m	749	54
DTP3	Card or history	64	12-23 m	749	54
DTP3	History	16	12-23 m	749	54
MCV	C or H <12 months	71	12-23 m	749	54
MCV	Card	49	12-23 m	749	54
MCV	Card or history	79	12-23 m	749	54
MCV	History	30	12-23 m	749	54
Pol1	C or H <12 months	92	12-23 m	749	54
Pol1	Card	52	12-23 m	749	54
Pol1	Card or history	95	12-23 m	749	54
Pol1	History	42	12-23 m	749	54
Pol3	C or H <12 months	66	12-23 m	749	54
Pol3	Card	48	12-23 m	749	54
Pol3	Card or history	69	12-23 m	749	54
Pol3	History	21	12-23 m	749	54

## 1997 Turkish Demographic and Health Survey 1998, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	87	12-23 m	689	38
BCG	Card	36	12-23 m	266	38
BCG	Card or History	88	12-23 m	689	38
BCG	History	52	12-23 m	424	38
DTP1	C or H <12 months	86	12-23 m	689	38
DTP1	Card	38	12-23 m	266	38
DTP1	Card or History	87	12-23 m	689	38
DTP1	History	49	12-23 m	424	38
DTP3	C or H <12 months	56	12-23 m	689	38
DTP3	Card	34	12-23 m	266	38

## Turkey - survey details

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DTP3	Card or History	59	12-23 m	689	38
DTP3	History	24	12-23 m	424	38
MCV	C or H <12 months	71	12-23 m	689	38
MCV	Card	33	12-23 m	266	38
MCV	Card or History	78	12-23 m	689	38
MCV	History	45	12-23 m	424	38
Pol1	C or H <12 months	92	12-23 m	689	38
Pol1	Card	38	12-23 m	266	38

Pol1	Card or History	94	12-23 m	689	38
Pol1	History	56	12-23 m	424	38
Pol3	C or H <12 months	61	12-23 m	689	38
Pol3	Card	36	12-23 m	266	38
Pol3	Card or History	64	12-23 m	689	38
Pol3	History	29	12-23 m	424	38

Further information and estimates prior to 2002 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)

## Turkey

### 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 receive 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.

Year	PAB coverage estimate (%)
2002	52
2003	53
2004	77
2005	62
2006	68
2007	70
2008	71
2009	71
2010	90
2011	90
2012	90
2013	90

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<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.