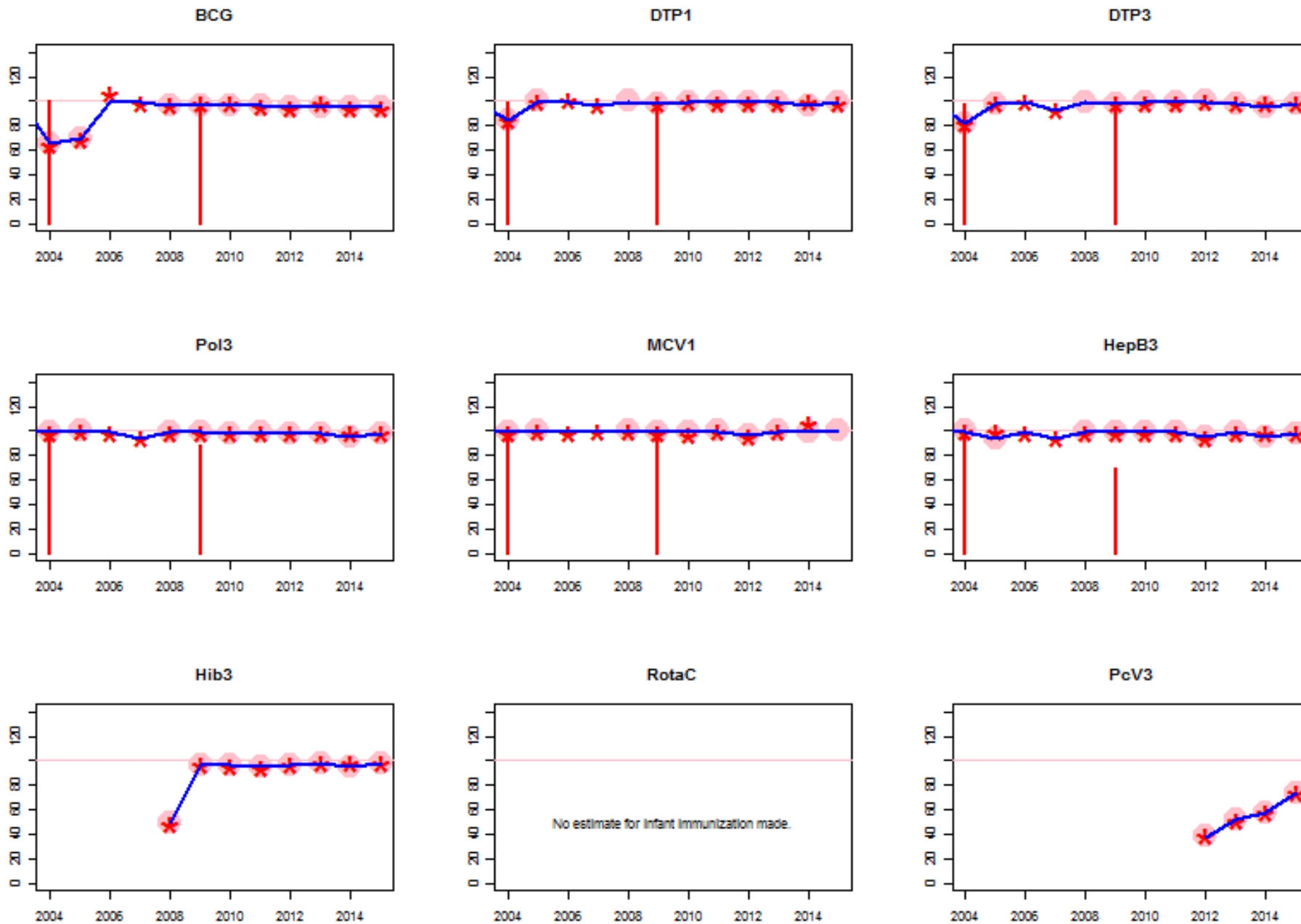
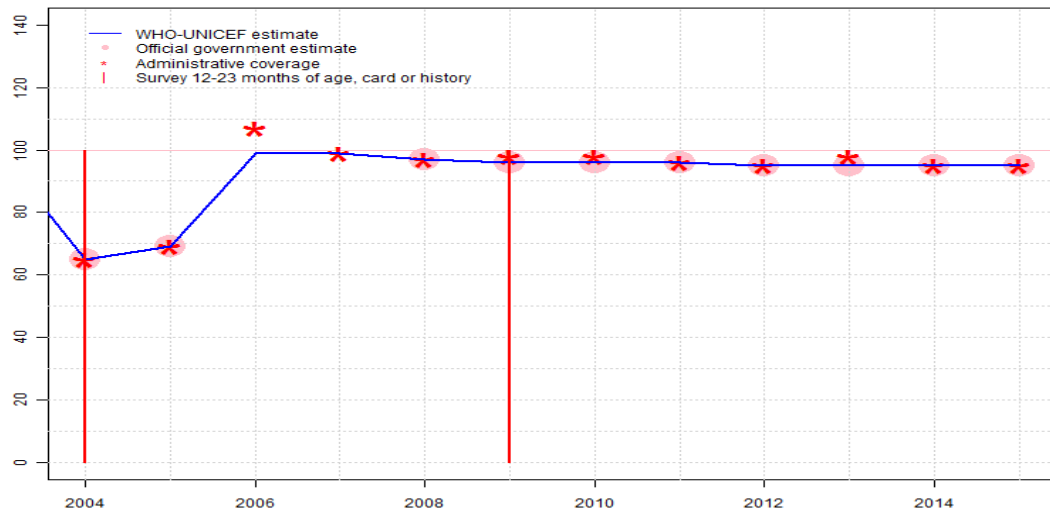


Kazakhstan: WHO and UNICEF estimates of immunization coverage: 2015 revision



Kazakhstan - BCG

KAZ - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	65	69	99	99	97	96	96	96	95	95	95	95
Estimate GoC	•	•	•	•••	•••	•••	•••	•••	••	••	••	••
Official	65	69	NA	NA	97	96	96	96	95	95	95	95
Administrative	65	69	107	99	97	98	98	96	95	98	95	95
Survey	100	NA	NA	NA	NA	100	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.

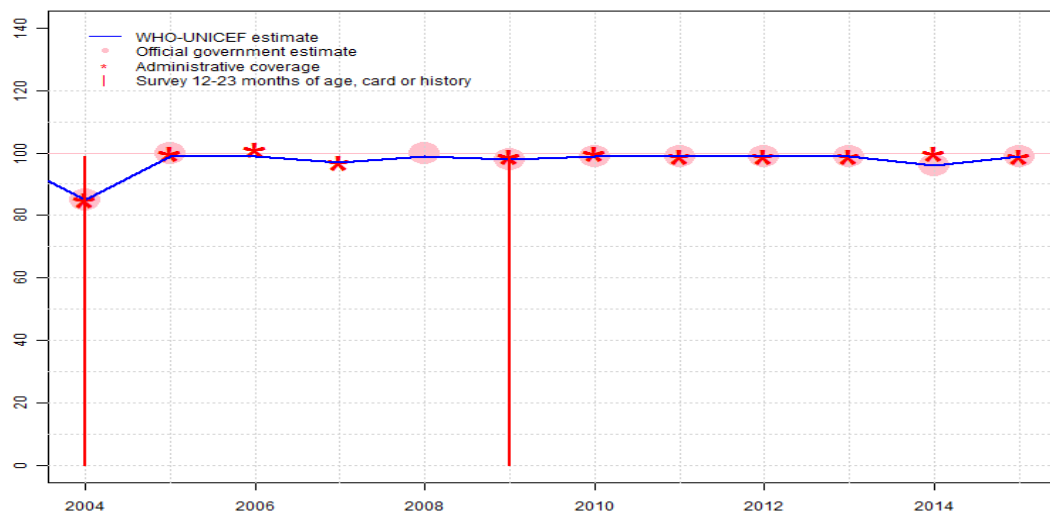
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government. Kazakhstan Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey may be conducted in a period that does not reflect vaccine shortage. Decline is the result of five months of vaccine stock out. Estimate challenged by: S-
- 2005: Decline is the result of five months of vaccine stock out. MICH 2006 survey result represents catch-up following 2004-2005 stock out. Estimate challenged by: S-
- 2006: MICH 2006 survey result represents catch-up following 2004-2005 stock out. Reported data excluded. 107 percent greater than 100 percent. Estimate challenged by: R-S-
- 2007: Estimate based on reported administrative data. 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 supported by survey. Survey evidence of 100 percent based on 1 survey(s). GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

Kazakhstan - DTP1

KAZ - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	85	99	99	97	99	98	99	99	99	99	96	99
Estimate GoC	●	●	●	●●	●●	●●●	●●●	●●●	●	●●	●●	●●
Official	85	100	NA	NA	100	98	99	99	99	99	96	99
Administrative	85	100	101	97	NA	99	100	99	99	99	100	99
Survey	99	NA	NA	NA	NA	99	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.

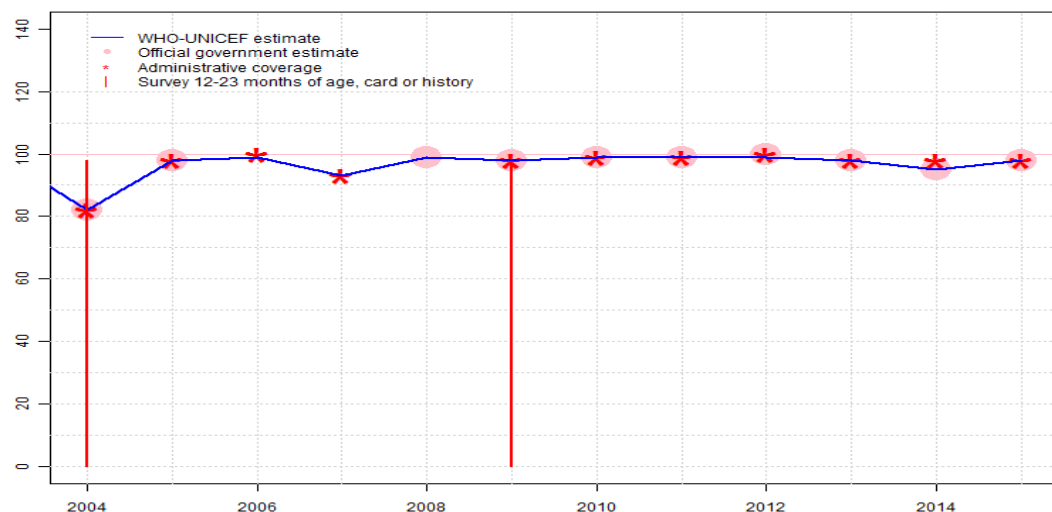
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Reported data calibrated to 1997 and 2009 levels. Kazakhstan Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey may be conducted in a period that does not reflect vaccine shortage. Decline results from three month vaccine stock out. Estimate challenged by: S-
- 2005: Reported data calibrated to 1997 and 2009 levels. Estimate challenged by: S-
- 2006: DTP1 coverage estimated based on DTP3 coverage of 100. Reported data excluded. 101 percent greater than 100 percent. Estimate challenged by: R-S-
- 2007: Reported data calibrated to 1997 and 2009 levels. GoC=S+ D+
- 2008: Reported data calibrated to 1997 and 2009 levels. GoC=S+
- 2009: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: DTP1 coverage estimated based on DTP3 coverage of 100. Estimate challenged by: R-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

Kazakhstan - DTP3

KAZ - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	82	98	99	93	99	98	99	99	99	98	95	98
Estimate GoC	●	●	●	●●●	●●	●●●	●●●	●●●	●●	●●	●●	●●
Official	82	98	NA	NA	99	98	99	99	100	98	95	98
Administrative	82	98	100	93	NA	98	99	99	100	98	98	98
Survey	98	NA	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: 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.

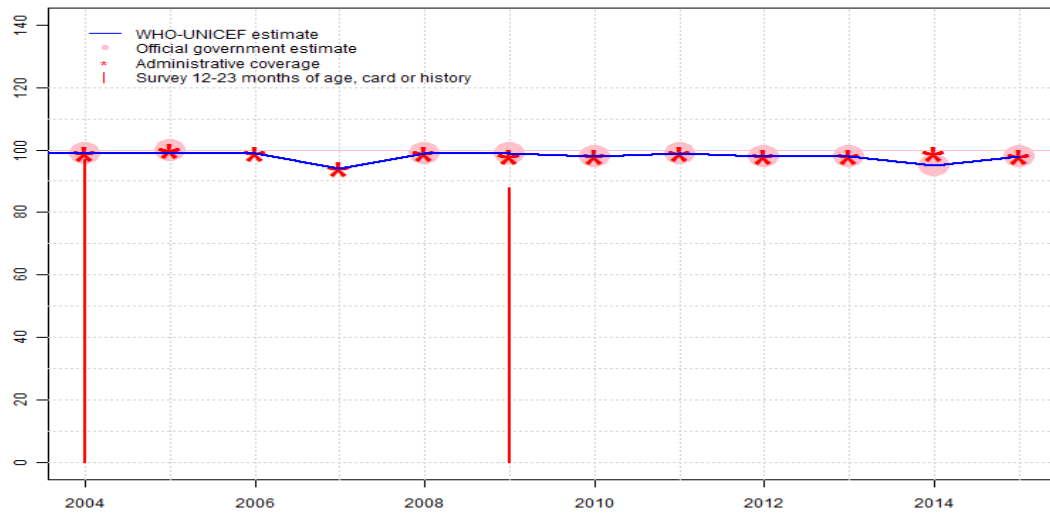
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government. Kazakhstan Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey may be conducted in a period that does not reflect vaccine shortage. Kazakhstan Multiple Indicator Cluster Survey 2006 card or history results of 98 percent modified for recall bias to 99 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 96 percent and 3d dose card only coverage of 96 percent. Decline results from three month vaccine stock out. Estimate challenged by: S-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2006: Estimate based on reported administrative data. Estimate challenged by: S-
- 2007: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+
- 2009: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Multiple Indicator Cluster Survey in the Republic of Kazakhstan 2010-2011 card or history results of 97 percent modified for recall bias to 98 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 95 percent and 3d dose card only coverage of 94 percent. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

Kazakhstan - Pol3

KAZ - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	99	99	94	99	99	98	99	98	98	95	98
Estimate GoC	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●	●●	●●	●●
Official	99	100	NA	NA	99	99	98	99	98	98	95	98
Administrative	99	100	99	94	99	98	98	99	98	98	99	98
Survey	97	NA	NA	NA	NA	88	NA	NA	NA	NA	NA	NA

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

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

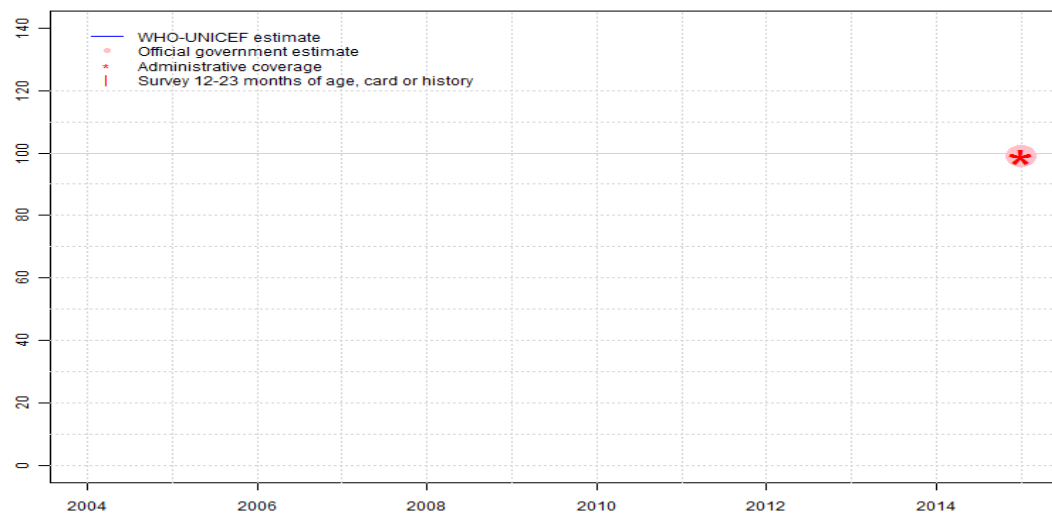
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). Kazakhstan Multiple Indicator Cluster Survey 2006 card or history results of 97 percent modified for recall bias to 99 percent based on 1st dose card or history coverage of 100 percent, 1st dose card only coverage of 95 percent and 3d dose card only coverage of 95 percent. 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 reported administrative data. 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 supported by survey. Survey evidence of 89 percent based on 1 survey(s). Multiple Indicator Cluster Survey in the Republic of Kazakhstan 2010-2011 card or history results of 88 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 96 percent and 3d dose card only coverage of 86 percent. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

Kazakhstan - IPV1

KAZ - IPV1



Description:

2015: 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+

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	99
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	99
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	99
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

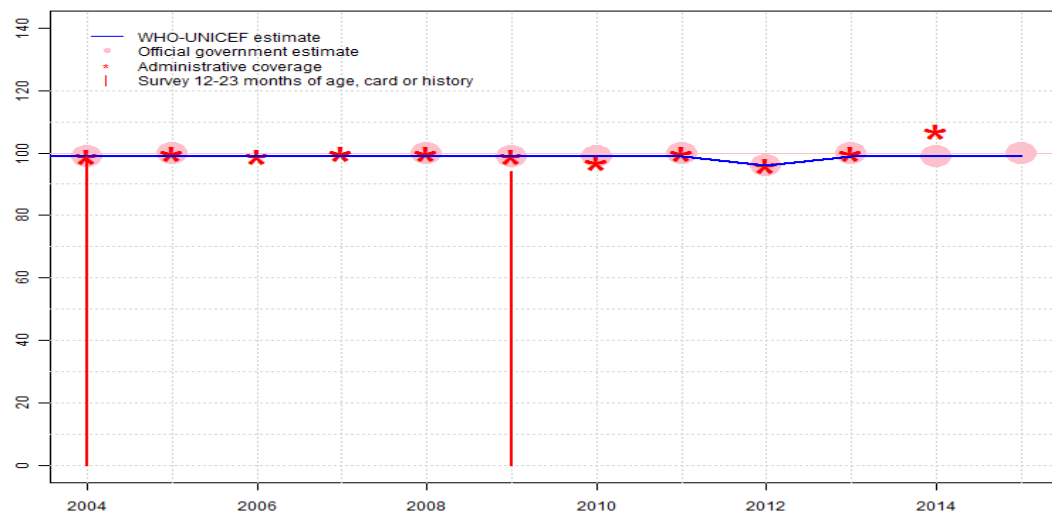
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Kazakhstan - MCV1

KAZ - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	99	99	99	99	99	99	99	96	99	99	99
Estimate GoC	●	●	●	●	●●●	●●●	●●●	●●●	●●	●●	●●	●●
Official	99	100	NA	NA	100	99	99	100	96	100	99	100
Administrative	99	100	99	100	100	99	97	100	96	100	107	NA
Survey	99	NA	NA	NA	NA	94	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.

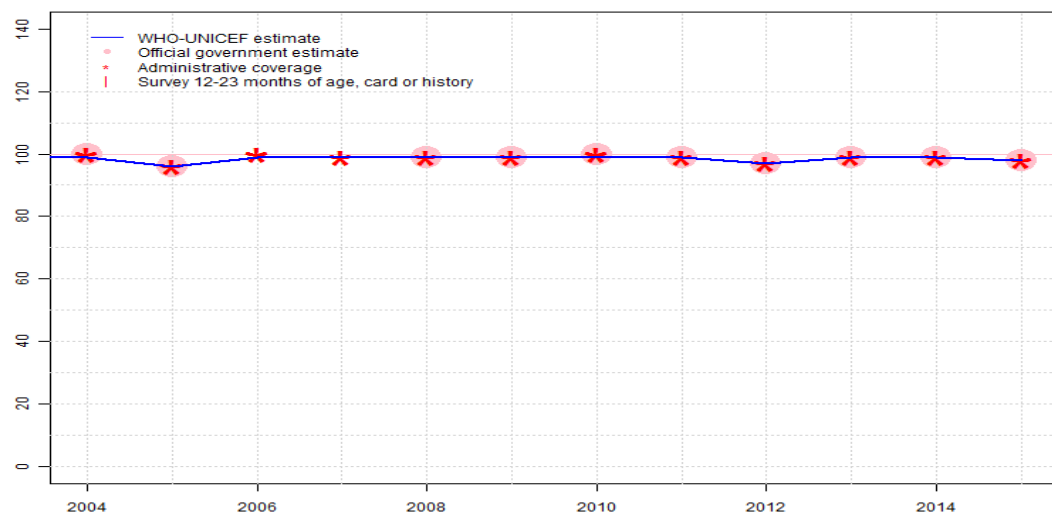
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on reported administrative data. Estimate challenged by: D-
- 2007: Estimate based on reported administrative data. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

Kazakhstan - MCV2

KAZ - MCV2



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	96	99	99	99	99	99	99	97	99	99	98
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	100	96	NA	NA	99	99	100	99	97	99	99	98
Administrative	100	96	100	99	99	99	100	99	97	99	99	98
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

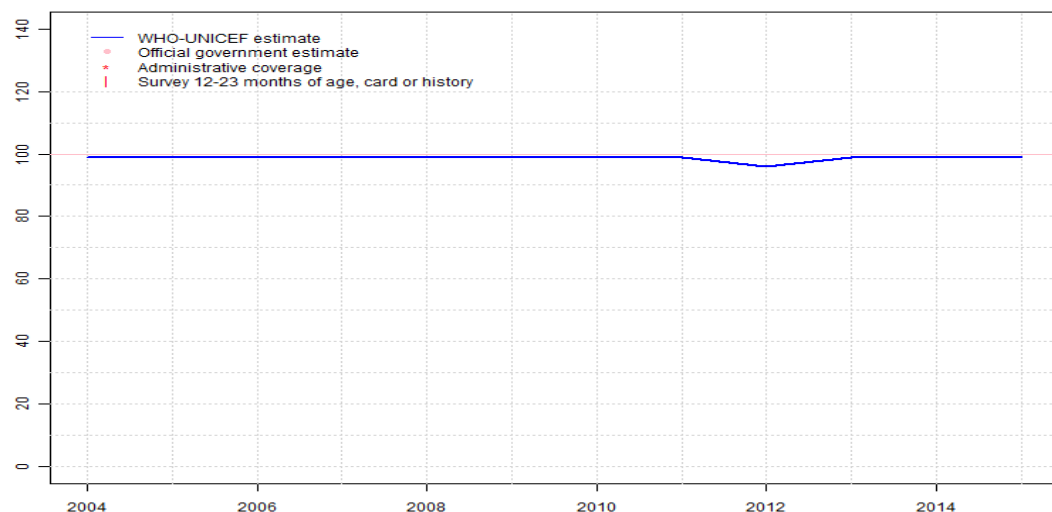
Description:

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

- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on reported administrative estimate. Estimate challenged by: D-
- 2007: Estimate based on reported administrative estimate. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: 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. Estimate challenged by: D-

Kazakhstan - RCV1

KAZ - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	99	99	99	99	99	99	99	96	99	99	99
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.

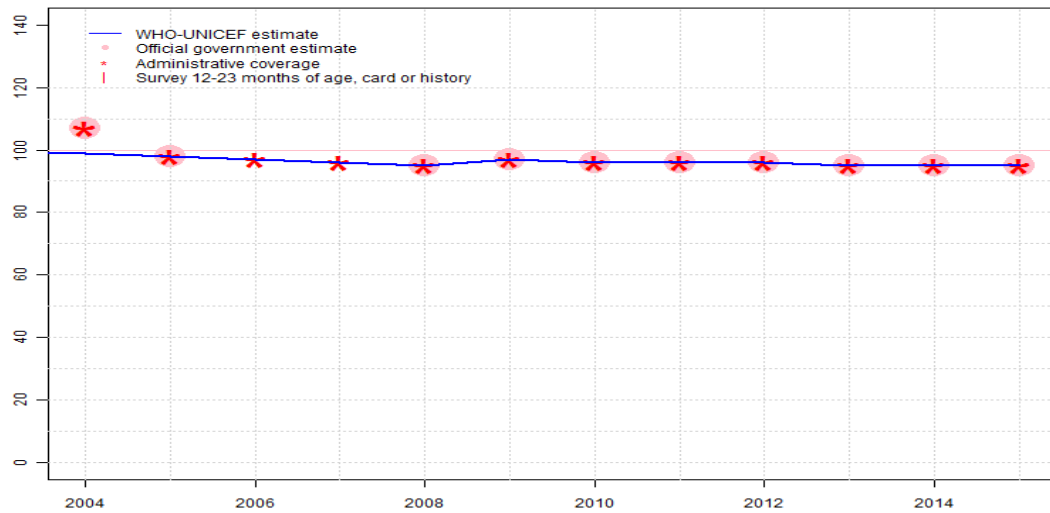
Description:

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-
- 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. GoC=R+ S+ D+
- 2009: Estimate based on estimated MCV1. GoC=R+ S+ D+
- 2010: Estimate based on estimated MCV1. GoC=R+ S+ D+
- 2011: Estimate based on estimated MCV1. GoC=R+ S+ D+
- 2012: Estimate based on estimated MCV1. GoC=R+ D+
- 2013: Estimate based on estimated MCV1. GoC=R+ D+
- 2014: Estimate based on estimated MCV1. GoC=R+ D+
- 2015: Estimate based on estimated MCV1. 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+

Kazakhstan - HepBB

KAZ - HepBB



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	98	97	96	95	97	96	96	96	95	95	95
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Official	107	98	NA	NA	95	97	96	96	96	95	95	95
Administrative	107	98	97	96	95	97	96	96	96	95	95	95
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

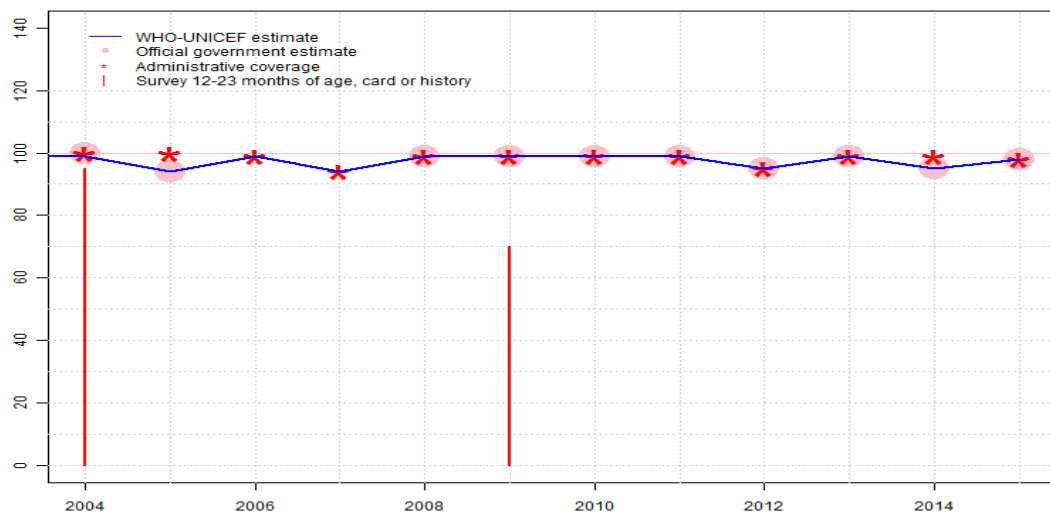
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on interpolation between reported values. Reported data excluded. 107 percent greater than 100 percent. GoC=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 reported administrative estimate. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on 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. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

Kazakhstan - HepB3

KAZ - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	94	99	94	99	99	99	99	95	99	95	98
Estimate GoC	●	●●●	●●●	●	●	●	●	●	●●	●●	●●	●●
Official	100	94	NA	NA	99	99	99	99	95	99	95	98
Administrative	100	100	99	94	99	99	99	99	95	99	99	98
Survey	95	NA	NA	NA	NA	70	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.

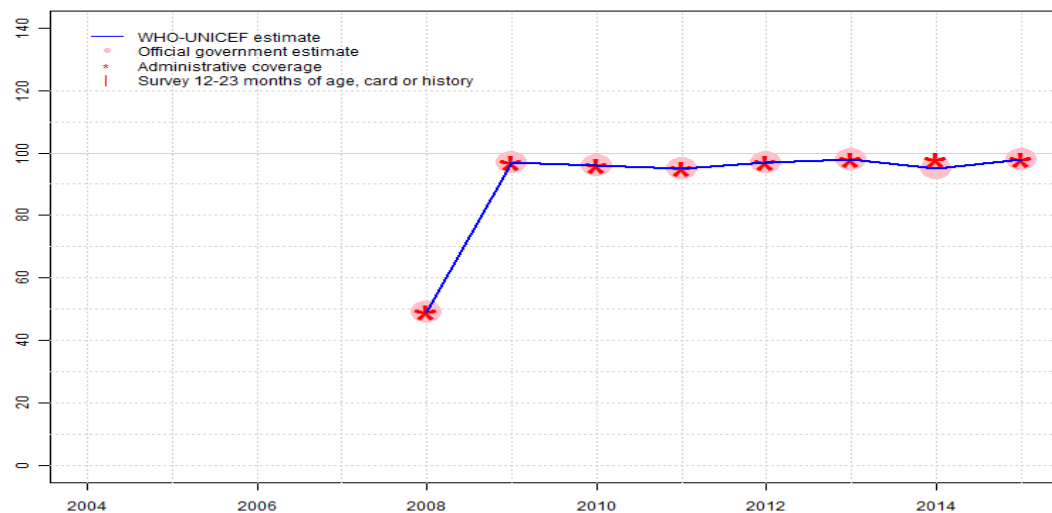
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). Estimate challenged by: 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 reported administrative data. Estimate challenged by: S-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2009: Estimate based on coverage reported by national government. Multiple Indicator Cluster Survey in the Republic of Kazakhstan 2010-2011 results ignored by working group. Survey result may not reflect successful introduction of DTP-HepB-Hib introduction. Multiple Indicator Cluster Survey in the Republic of Kazakhstan 2010-2011 card or history results of 70 percent modified for recall bias to 80 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 76 percent and 3d dose card only coverage of 63 percent. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

Kazakhstan - Hib3

KAZ - Hib3



Description:

- 2008: Estimate based on coverage reported by national government. Hib vaccine introduced in 2008. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Increase attributed to successful introduction. 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. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

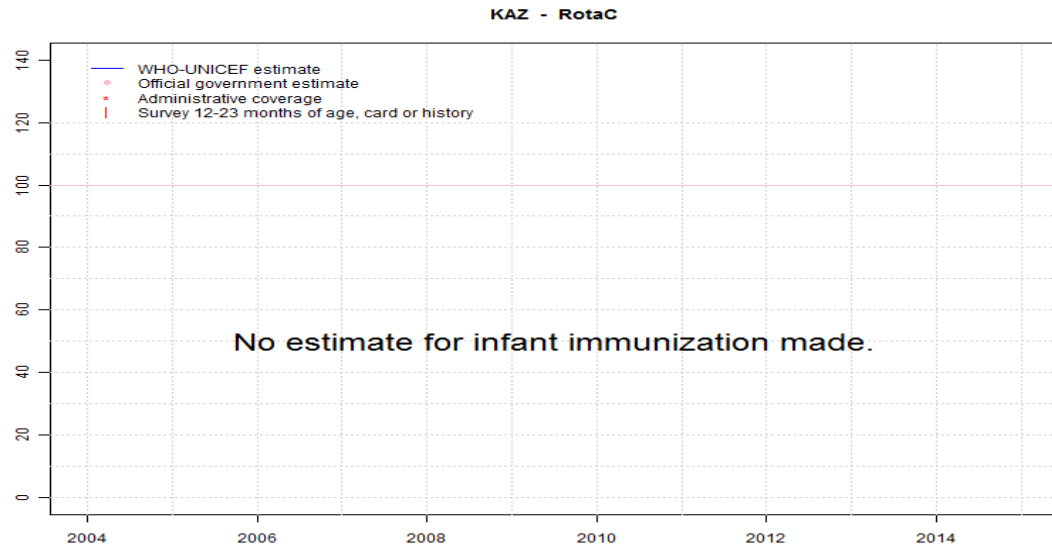
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	49	97	96	95	97	98	95	98
Estimate GoC	NA	NA	NA	NA	●●	●●	●●	●●	●●	●●	●●	●●
Official	NA	NA	NA	NA	49	97	96	95	97	98	95	98
Administrative	NA	NA	NA	NA	49	97	96	95	97	98	98	98
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

Kazakhstan - 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

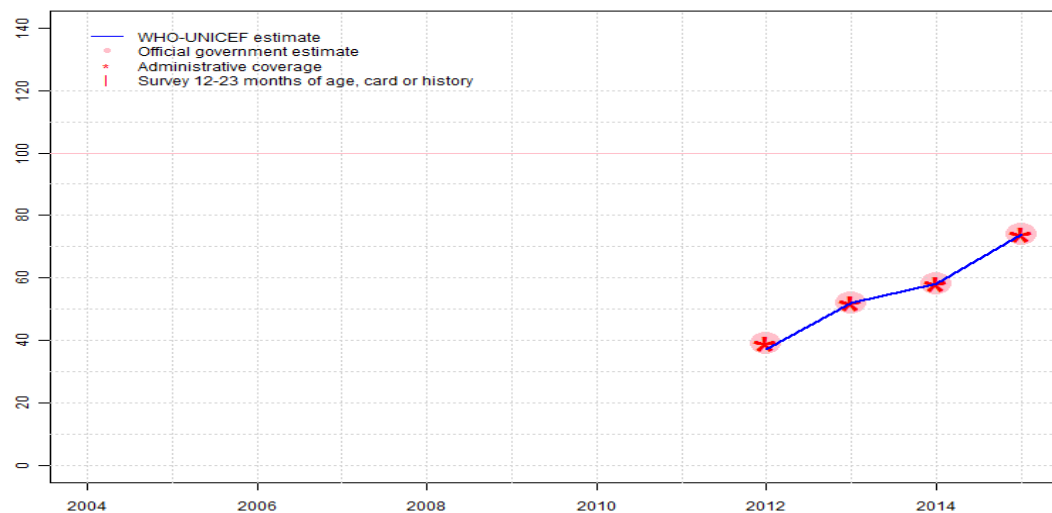
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Kazakhstan - PcV3

KAZ - PcV3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	37	52	58	74
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	•	••	••	••
Official	NA	NA	NA	NA	NA	NA	NA	NA	39	52	58	74
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	39	52	58	74
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

Description:

- 2012: Coverage of 39 percent achieved in 96 percent of the population. Estimate is based on annualized coverage for the national birth cohort. Estimate challenged by: R-
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ D+
- 2015: 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+

Kazakhstan - survey details

2009 Multiple Indicator Cluster Survey in the Republic of Kazakhstan 2010-2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	99	15-26 m	-	66
BCG	Card	96	15-26 m	-	66
BCG	Card or History	100	15-26 m	1076	66
BCG	History	3	15-26 m	-	66
DTP1	C or H <12 months	98	15-26 m	-	66
DTP1	Card	95	15-26 m	-	66
DTP1	Card or History	99	15-26 m	1076	66
DTP1	History	4	15-26 m	-	66
DTP3	C or H <12 months	93	15-26 m	-	66
DTP3	Card	94	15-26 m	-	66
DTP3	Card or History	97	15-26 m	1076	66
DTP3	History	3	15-26 m	-	66
HepB1	C or H <12 months	96	15-26 m	-	66
HepB1	Card	76	15-26 m	-	66
HepB1	Card or History	97	15-26 m	1076	66
HepB1	History	20	15-26 m	-	66
HepB3	C or H <12 months	67	15-26 m	-	66
HepB3	Card	63	15-26 m	-	66
HepB3	Card or History	70	15-26 m	1076	66
HepB3	History	7	15-26 m	-	66
MCV1	C or H <12 months	89	15-26 m	-	66
MCV1	Card	90	15-26 m	-	66
MCV1	Card or History	94	15-26 m	1076	66
MCV1	History	3	15-26 m	-	66
Pol1	C or H <12 months	99	15-26 m	-	66
Pol1	Card	96	15-26 m	-	66
Pol1	Card or History	99	15-26 m	1076	66
Pol1	History	4	15-26 m	-	66
Pol3	C or H <12 months	81	15-26 m	-	66
Pol3	Card	86	15-26 m	-	66
Pol3	Card or History	88	15-26 m	1076	66
Pol3	History	2	15-26 m	-	66

2004 Kazakhstan Multiple Indicator Cluster Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	98	15-26 m	991	95
BCG	Card	95	15-26 m	991	95
BCG	Card or History	100	15-26 m	991	95
BCG	History	4	15-26 m	991	95
DTP1	C or H <12 months	98	15-26 m	991	95
DTP1	Card	96	15-26 m	991	95
DTP1	Card or History	99	15-26 m	991	95
DTP1	History	4	15-26 m	991	95
DTP3	C or H <12 months	92	15-26 m	991	95
DTP3	Card	96	15-26 m	991	95
DTP3	Card or History	98	15-26 m	991	95
DTP3	History	2	15-26 m	991	95
HepB1	C or H <12 months	94	15-26 m	991	95
HepB1	Card	95	15-26 m	991	95
HepB1	Card or History	95	15-26 m	991	95
HepB1	History	0	15-26 m	991	95
HepB3	C or H <12 months	92	15-26 m	991	95
HepB3	Card	95	15-26 m	991	95
HepB3	Card or History	95	15-26 m	991	95
HepB3	History	0	15-26 m	991	95
MCV1	C or H <12 months	95	15-26 m	991	95
MCV1	Card	96	15-26 m	991	95
MCV1	Card or History	99	15-26 m	991	95
MCV1	History	4	15-26 m	991	95
Pol1	C or H <12 months	99	15-26 m	991	95
Pol1	Card	95	15-26 m	991	95
Pol1	Card or History	100	15-26 m	991	95
Pol1	History	4	15-26 m	991	95
Pol3	C or H <12 months	94	15-26 m	991	95
Pol3	Card	95	15-26 m	991	95
Pol3	Card or History	97	15-26 m	991	95
Pol3	History	1	15-26 m	991	95

1998 Kazakhstan Demographic and Health Survey 1999, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	90	12-23 m	244	-

Kazakhstan - survey details

DTP1	Card	90	12-23 m	244	-	Pol1	Card	90	12-23 m	244	-
DTP3	Card	89	12-23 m	244	-	Pol3	Card	83	12-23 m	244	-
MCV1	Card	79	12-23 m	244	-						

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