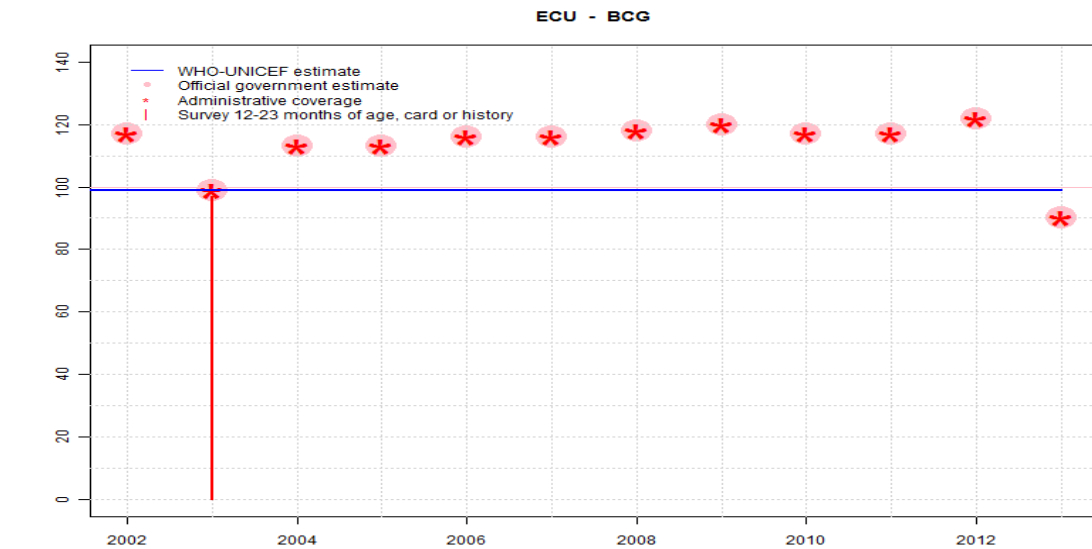


Ecuador - BCG



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	99	99	99	99	99	99	99	99	99	99	99	99
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	117	99	113	113	116	116	118	120	117	117	122	90
Administrative	117	99	113	113	116	116	118	120	117	117	122	90
Survey	NA	97	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:

2002: Estimate based on extrapolation from data reported by national government. Reported data excluded. 117 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2003: Estimate based on extrapolation from data reported by national government. Survey of Demography and Maternal and Child Health (ENDEMAIN-2004) results ignored by working group. Estimate based on reported data for other antigens. Reported data excluded. Decline in reported coverage from 117 percent to 99 percent with increase to 113 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2004: Estimate based on extrapolation from data reported by national government. Reported data excluded. 113 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2005: Estimate based on extrapolation from data reported by national government. Reported data excluded. 113 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2006: Estimate based on extrapolation from data reported by national government. Reported data excluded. 116 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2007: Estimate based on extrapolation from data reported by national government. Reported data excluded. 116 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF

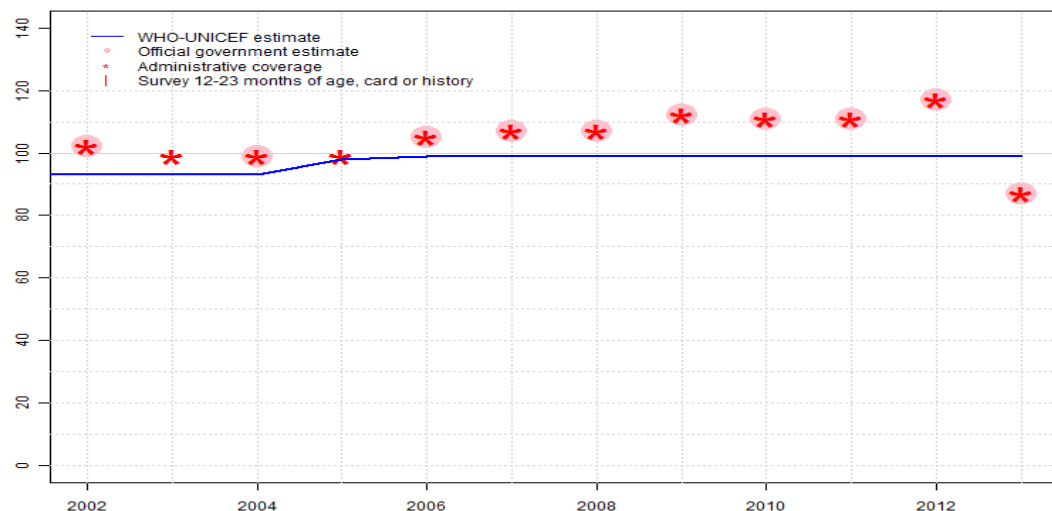
estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

- 2008: Estimate based on extrapolation from data reported by national government. Reported data excluded. 118 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2009: Estimate based on extrapolation from data reported by national government. Reported data excluded. 120 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2010: Estimate based on extrapolation from data reported by national government. Reported data excluded. 117 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2011: Estimate based on extrapolation from data reported by national government. Reported data excluded. 117 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. 122 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Change in reported coverage from 122 level to 90 percent. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a

high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - DTP1

ECU - DTP1



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	93	93	93	98	99	99	99	99	99	99	99	99
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	102	NA	99	NA	105	107	107	112	111	111	117	87
Administrative	102	99	99	99	105	107	107	112	111	111	117	87
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:

- 2002: Reported data calibrated to 1997 levels. Reported data excluded. 102 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2003: Reported data calibrated to 1997 levels. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2004: Reported data calibrated to 1997 levels. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2005: DTP1 coverage estimated based on DTP3 coverage of 94. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2006: DTP1 coverage estimated based on DTP3 coverage of 98. Reported data excluded. 105 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2007: DTP1 coverage estimated based on DTP3 coverage of 99. Reported data excluded. 107 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2008: DTP1 coverage estimated based on DTP3 coverage of 99. Reported data excluded. 107 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2009: DTP1 coverage estimated based on DTP3 coverage of 99. Reported data excluded. 112 percent greater than 100 percent. GoC=Assigned by work-

ing group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2010: DTP1 coverage estimated based on DTP3 coverage of 99. Reported data excluded. 111 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

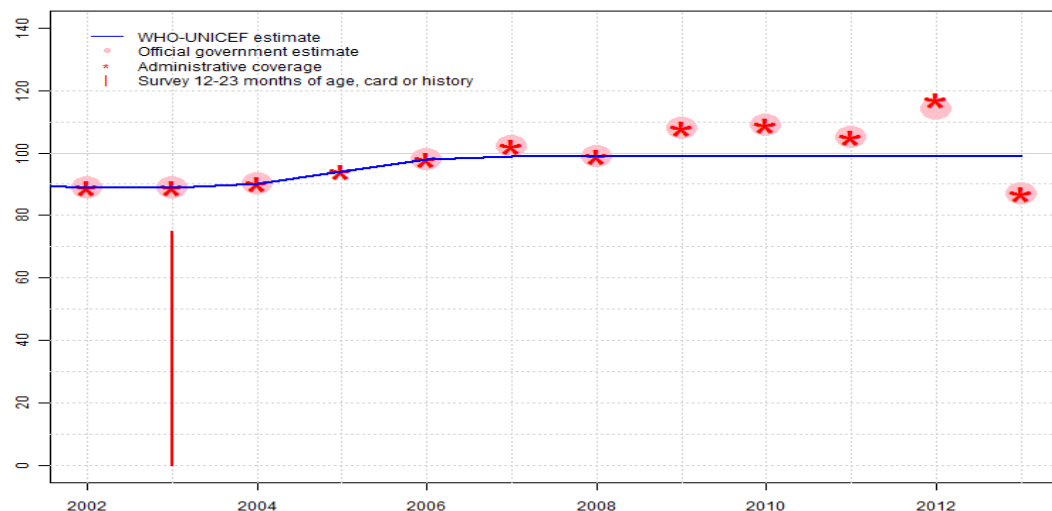
2011: DTP1 coverage estimated based on DTP3 coverage of 99. Reported data excluded. 111 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2012: DTP1 coverage estimated based on DTP3 coverage of 99. Reported data excluded. 117 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2013: DTP1 coverage estimated based on DTP3 coverage of 99. Reported data excluded. Change in reported coverage from 117 level to 87 percent. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - DTP3

ECU - DTP3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	89	89	90	94	98	99	99	99	99	99	99	99
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	89	89	90	NA	98	102	99	108	109	105	114	87
Administrative	89	89	90	94	98	102	99	108	109	105	117	87
Survey	NA	75	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:

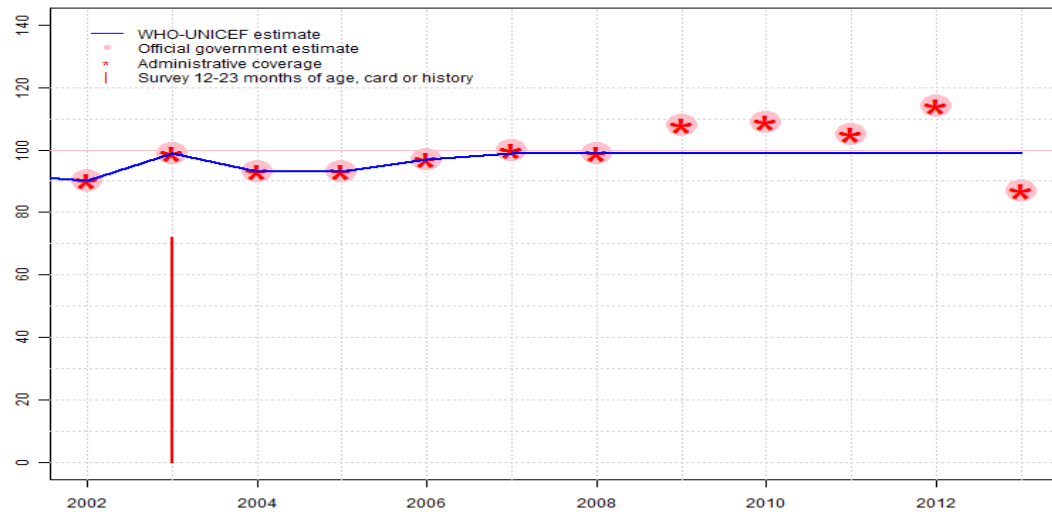
- 2002: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2003: Estimate based on coverage reported by national government. Survey of Demography and Maternal and Child Health (ENDEMAIN-2004) results ignored by working group. Data not available for DTP1 and HepB3. No CARD only data to adjust for recall bias. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2004: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2005: Estimate based on reported administrative data. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2006: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2007: Estimate based on interpolation between data reported by national government. Reported data excluded. 102 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2008: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation

of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

- 2009: Estimate based on extrapolation from data reported by national government. Reported data excluded. 108 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2010: Estimate based on extrapolation from data reported by national government. Reported data excluded. 109 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2011: Estimate based on extrapolation from data reported by national government. Reported data excluded. 105 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. 114 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Change in reported coverage from 114 level to 87 percent. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - Pol3

ECU - Pol3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	90	99	93	93	97	99	99	99	99	99	99	99
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	90	99	93	93	97	100	99	108	109	105	114	87
Administrative	90	99	93	93	97	100	99	108	109	105	114	87
Survey	NA	72	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:

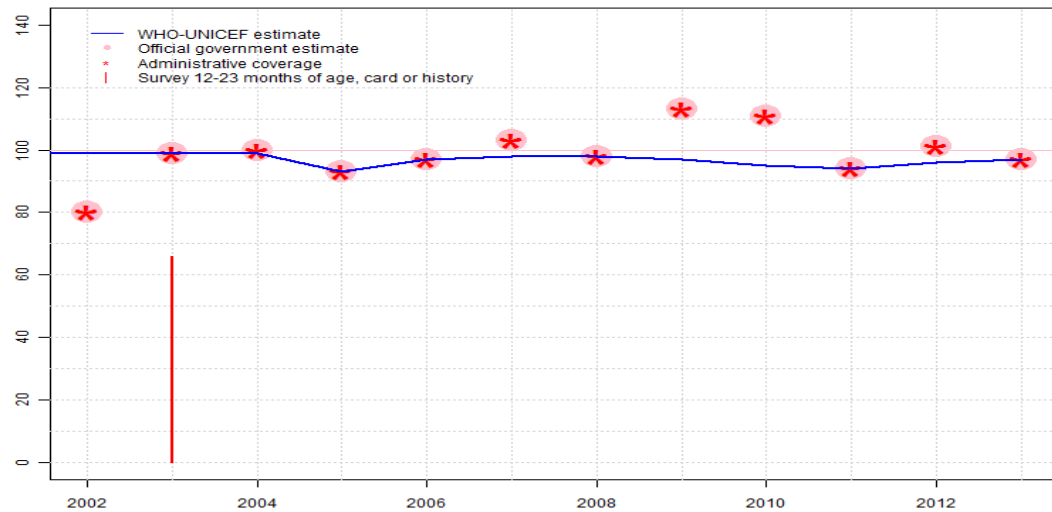
- 2002: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2003: Estimate based on coverage reported by national government. Survey of Demography and Maternal and Child Health (ENDEMAIN-2004) results ignored by working group. Data not available for DTP1 or HepB3. No CARD only data available to adjust for recall bias. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2004: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2005: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2006: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2007: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2008: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation

of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

- 2009: Estimate based on extrapolation from data reported by national government. Reported data excluded. 108 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2010: Estimate based on extrapolation from data reported by national government. Reported data excluded. 109 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2011: Estimate based on extrapolation from data reported by national government. Reported data excluded. 105 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. 114 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Change in reported coverage from 114 level to 87 percent. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - MCV

ECU - MCV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	99	99	99	93	97	98	98	97	95	94	96	97
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	80	99	100	93	97	103	98	113	111	94	101	97
Administrative	80	99	100	93	97	103	98	113	111	94	101	97
Survey	NA	66	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.

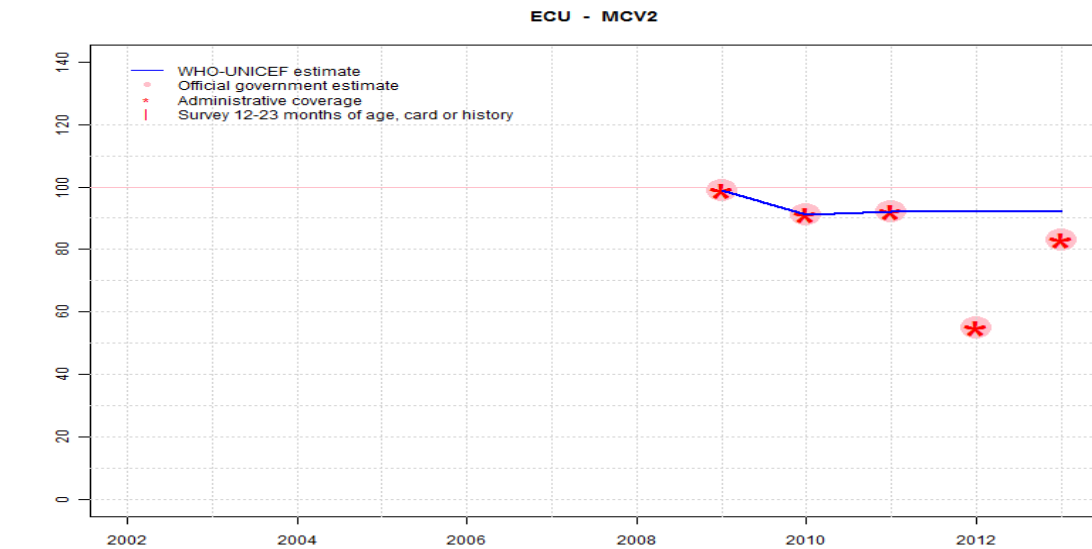
Description:

- 2002: Estimate based on interpolation between data reported by national government. Reported data excluded. Decline in reported coverage from 116 percent to 80 percent with increase to 99 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2003: Estimate based on coverage reported by national government. Survey of Demography and Maternal and Child Health (ENDEMAIN-2004) results ignored by working group. Survey results likely underestimate coverage. Measles vaccination recommended between 12 and 23 months of age. Survey cohort of 12-23 months of age includes children still eligible for vaccination. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2004: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2005: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2006: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2007: Estimate based on interpolation between data reported by national government. Reported data excluded. 103 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

- period.
- 2008: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2009: Estimate based on interpolation between data reported by national government. Reported data excluded. 113 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2010: Estimate based on interpolation between data reported by national government. Reported data excluded. 111 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2011: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2012: Estimate based on interpolation between data reported by national government. Reported data excluded. 101 percent greater than 100 percent. Estimate of 96 percent changed from previous revision value of 94 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Estimate based on coverage reported by national government. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. Programme reports a 3 month stock-out at the national level. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower

coverage throughout the time period.

Ecuador - MCV2



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	99	91	92	92	92
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	99	91	92	55	83
Administrative	NA	NA	NA	NA	NA	NA	NA	99	91	92	55	83
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.

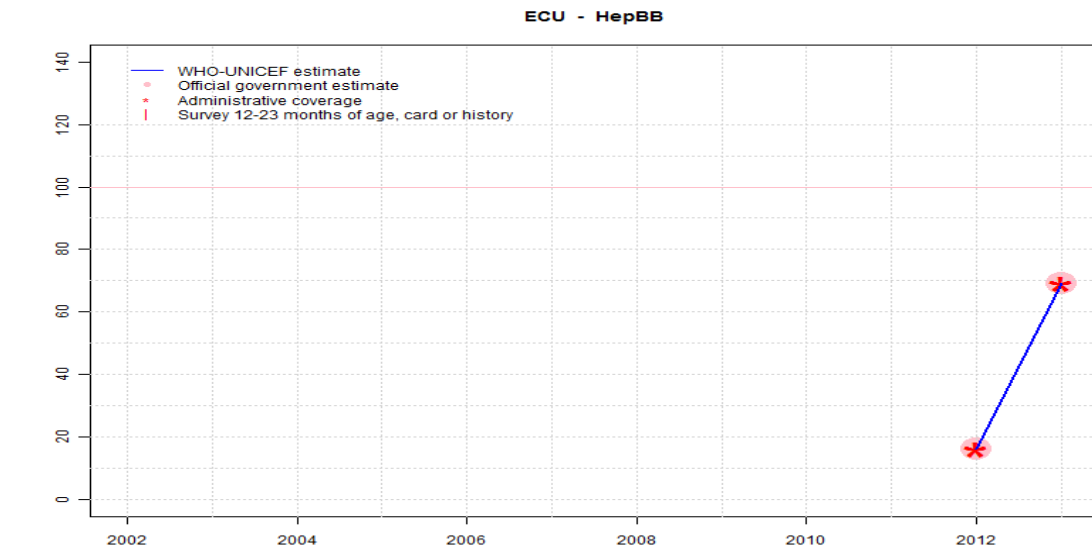
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

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

- 2009: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2010: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2011: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in reported coverage from 92 percent to 55 percent with increase to 83 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Change in reported coverage from 55 level to 83 percent. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. Programme reports a 3 month stockout at the national level. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - HepBB



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16	69
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16	69
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16	69
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.

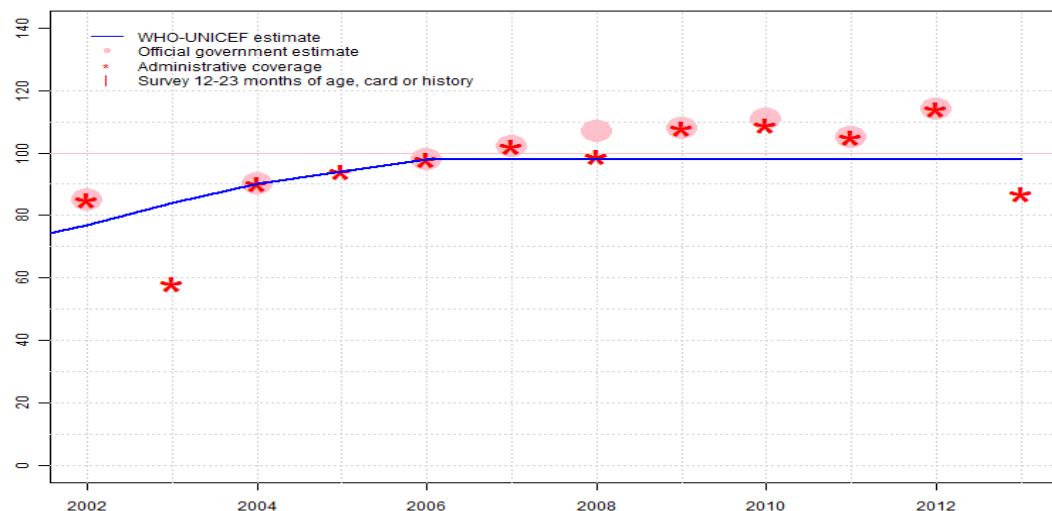
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2012: Estimate based on coverage reported by national government. HepB birth dose introduced universally in 2012. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Estimate based on coverage reported by national government. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. Programme reports a three month stockout of monovalent HepB vaccine. Estimate based on reported coverage. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - HepB3

ECU - HepB3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	77	84	90	94	98	98	98	98	98	98	98	98
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	85	NA	90	NA	98	102	107	108	111	105	114	NA
Administrative	85	58	90	94	98	102	99	108	109	105	114	87
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:

- 2002: Estimate based on interpolation between reported values. Reported data excluded. Unexplained increase from 71 percent to 85 percent with decrease 58 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2003: Estimate based on interpolation between reported values. Reported data excluded. Decline in reported coverage from 85 percent to 58 percent with increase to 90 percent. Decline associated with replacement of monovalent hepatitis B vaccine with DTP-HepB-Hib combination vaccine. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2004: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2005: Estimate based on reported administrative estimate. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2006: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2007: Estimate based on extrapolation from data reported by national government. Reported data excluded. 102 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2008: Estimate based on extrapolation from data reported by national govern-

ment. Reported data excluded. 107 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2009: Estimate based on extrapolation from data reported by national government. Reported data excluded. 108 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

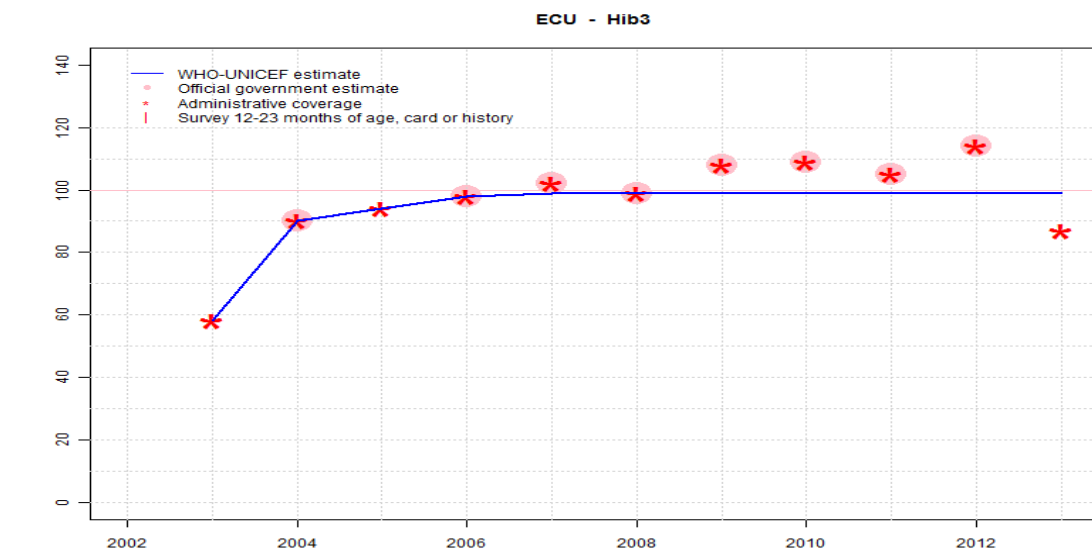
2010: Estimate based on extrapolation from data reported by national government. Reported data excluded. 111 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2011: Estimate based on extrapolation from data reported by national government. Reported data excluded. 105 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. 114 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in reported coverage from 114 level to 87 percent. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - Hib3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	58	90	94	98	99	99	99	99	99	99	99
Estimate GoC	NA	•	•	•	•	•	•	•	•	•	•	•
Official	NA	NA	90	NA	98	102	99	108	109	105	114	NA
Administrative	NA	58	90	94	98	102	99	108	109	105	114	87
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.

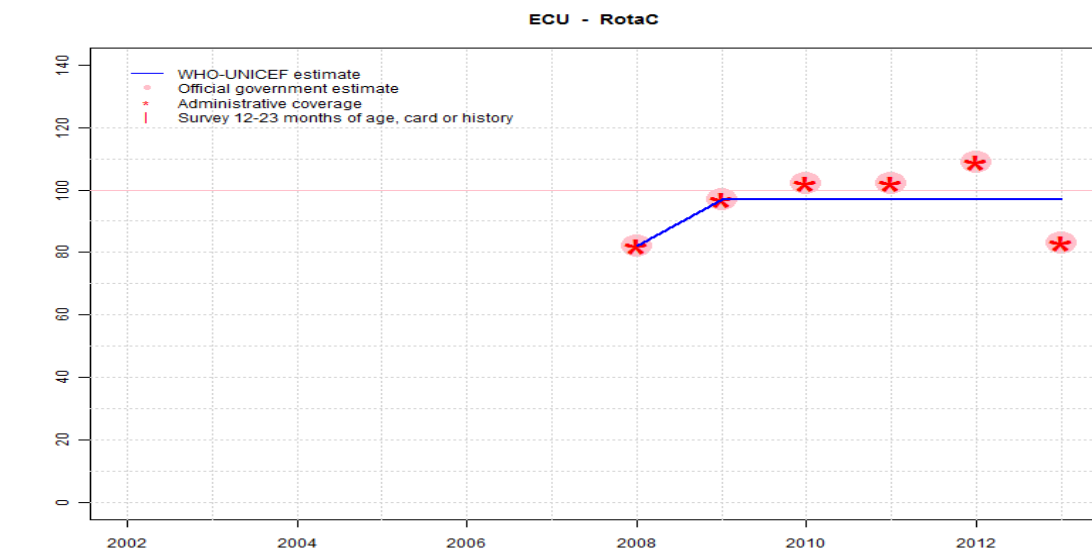
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Estimate based on reported administrative estimate. Hib vaccine introduced in 2003. Vaccine presentation is DTP-HepB-Hib. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2004: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2005: Estimate based on reported administrative estimate. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2006: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2007: Estimate based on interpolation between reported values. Reported data excluded. 102 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2008: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2009: Estimate based on extrapolation from data reported by national government. Reported data excluded. 108 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

- period.
- 2010: Estimate based on extrapolation from data reported by national government. Reported data excluded. 109 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2011: Estimate based on extrapolation from data reported by national government. Reported data excluded. 105 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. 114 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in reported coverage from 114 level to 87 percent. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - RotaC



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	82	97	97	97	97	97
Estimate GoC	NA	NA	NA	NA	NA	NA	●	●	●	●	●	●
Official	NA	NA	NA	NA	NA	NA	82	97	102	102	109	83
Administrative	NA	NA	NA	NA	NA	NA	82	97	102	102	109	83
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.

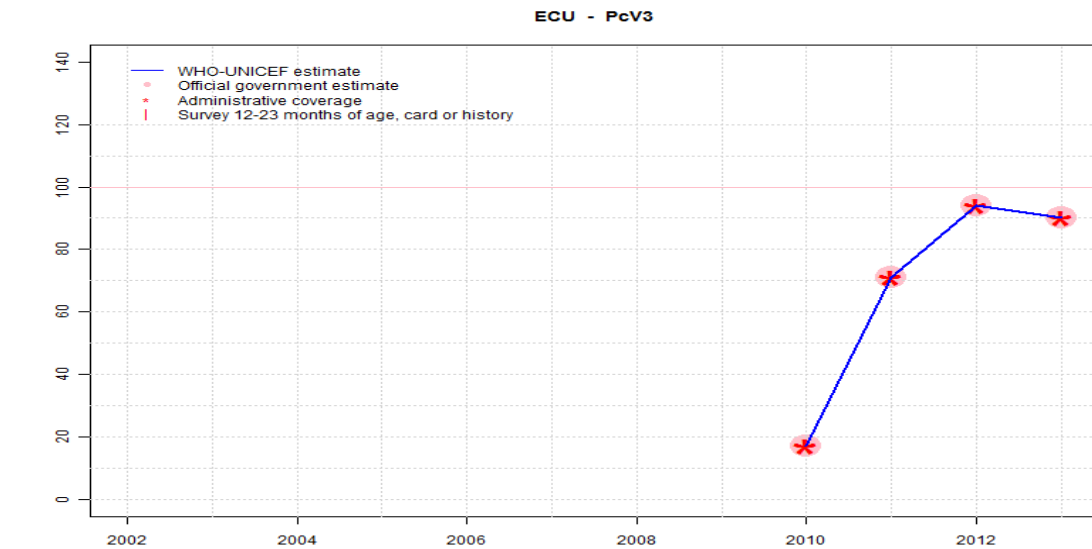
Description:

- 2008: Estimate based on coverage reported by national government. Rotavirus vaccine introduced in 2007, reporting began in 2008. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2009: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2010: Estimate based on extrapolation from data reported by national government. Reported data excluded. 102 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2011: Estimate based on extrapolation from data reported by national government. Reported data excluded. 102 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. 109 percent greater than 100 percent. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in reported coverage from 109 level to 83 percent. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage

Ecuador - RotaC

based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - PcV3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	17	71	94	90
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	17	71	94	90
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	17	71	94	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.

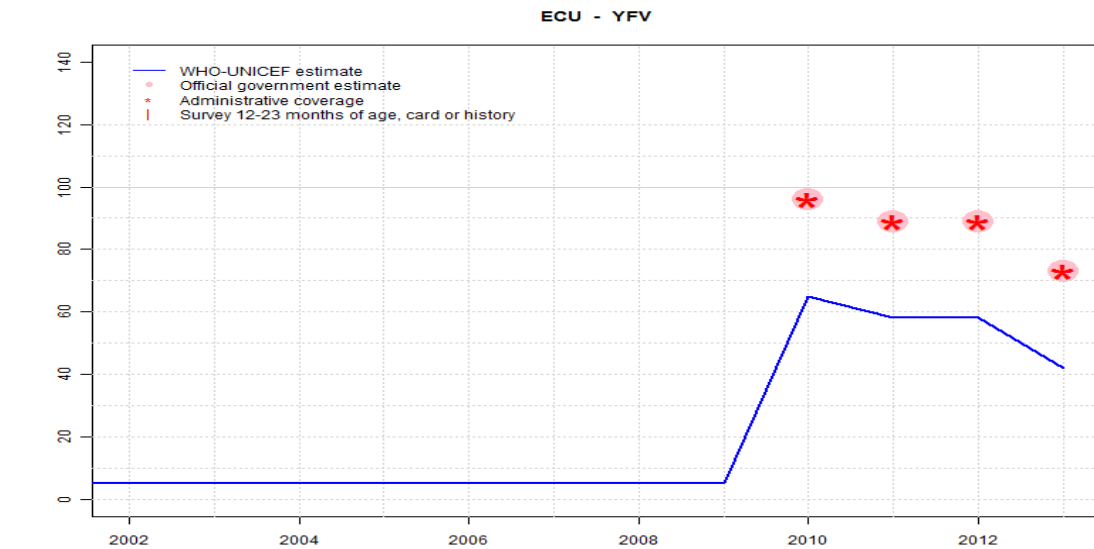
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2010: Estimate based on coverage reported by national government. Pneumococcal conjugate vaccine was introduced in 2010. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2011: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2012: Estimate based on coverage reported by national government. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Estimate based on coverage reported by national government. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - YFV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	5	5	5	5	5	5	5	5	65	58	58	42
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	96	89	89	73
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	96	89	89	73
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:

- 2002: Routine infant immunization recommended in high risk areas which comprises approximately 5 percent of the national birth cohort. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2003: Routine infant immunization recommended in high risk areas which comprises approximately 5 percent of the national birth cohort. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2004: Routine infant immunization recommended in high risk areas which comprises approximately 5 percent of the national birth cohort. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2005: Routine infant immunization recommended in high risk areas which comprises approximately 5 percent of the national birth cohort. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2006: Routine infant immunization recommended in high risk areas which comprises approximately 5 percent of the national birth cohort. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2007: Routine infant immunization recommended in high risk areas which comprises approximately 5 percent of the national birth cohort. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2008: Routine infant immunization recommended in high risk areas which comprises approximately 5 percent of the national birth cohort. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

- target populations suggest lower coverage throughout the time period.
- 2009: Routine infant immunization recommended in high risk areas which comprises approximately 5 percent of the national birth cohort. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2010: Estimates calibrated to level of measles coverage. Routine infant immunization is national. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2011: Reported data calibrated to 2010 levels. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2012: Reported data calibrated to 2010 levels. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.
- 2013: Reported data calibrated to 2010 levels. Decline in reported coverage is partly due to a revision of the target population estimate in 2013. No nationally representative household survey within the last 5 years. WHO and UNICEF strongly recommend a high-quality survey to confirm reported levels of coverage. Programme reports a 1 month stockout at the national level. GoC=Assigned by working group. Confidence in the WHO and UNICEF estimates is low due to the lack of high quality survey results. Recalculation of coverage based on an independent denominator and recent modification of reported target populations suggest lower coverage throughout the time period.

Ecuador - survey details

2003 Encuesta Demográfica y de Salud Materna e Infantil
(ENDEMAIN-2004)

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	93	12-23 m	788	72
BCG	Card or History	97	12-23 m	788	72
DTP3	C or H <12 months	70	12-23 m	788	72
DTP3	Card or History	75	12-23 m	788	72
MCV	C or H <12 months	18	12-23 m	788	72
MCV	Card or History	66	12-23 m	788	72
Pol3	C or H <12 months	68	12-23 m	788	72
Pol3	Card or History	72	12-23 m	788	72

1998 República del Ecuador, Encuesta Demográfica y de Salud
Materna e Infantil Endemain-99

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	58	12-23 m	679	-
DTP1	Card	58	12-23 m	679	-
DTP3	Card	52	12-23 m	679	-
MCV	Card	46	12-23 m	679	-
Pol1	Card	58	12-23 m	679	-
Pol3	Card	52	12-23 m	679	-

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

Ecuador

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	58
2003	60
2004	60
2005	65
2006	72
2007	72
2008	73
2009	73
2010	74
2011	85
2012	85
2013	85

¹ 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.