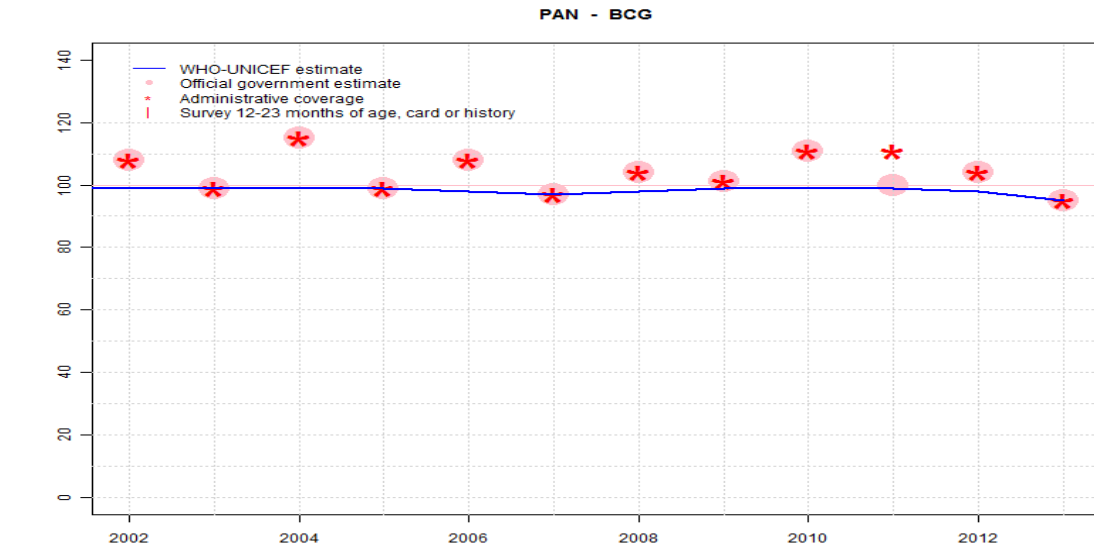


Panama - BCG



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	99	99	99	99	98	97	98	99	99	99	98	95
Estimate GoC	•	•	•	•	•	•	••	••	••	••	••	••
Official	108	99	115	99	108	97	104	101	111	100	104	95
Administrative	108	99	115	99	108	97	104	101	111	111	104	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.

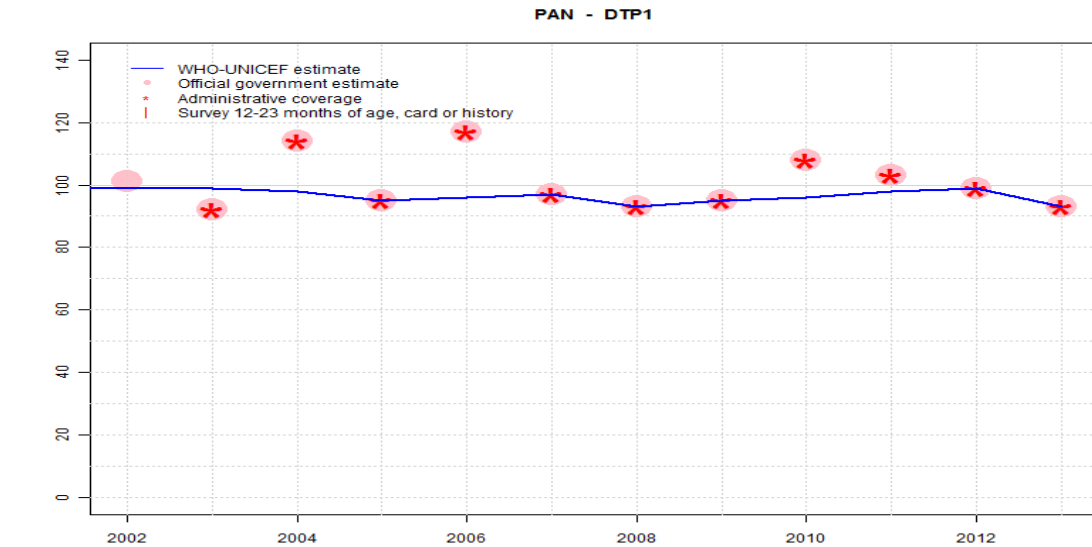
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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. 108 percent greater than 100 percent. GoC=No accepted empirical data
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on interpolation between data reported by national government. Reported data excluded. 115 percent greater than 100 percent. Reported data excluded. Unexplained increase from 99 percent to 115 percent with decrease 99 percent. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on interpolation between data reported by national government. Reported data excluded. 108 percent greater than 100 percent. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2008: Estimate based on interpolation between data reported by national government. Reported data excluded. 104 percent greater than 100 percent. GoC=D+
- 2009: Estimate based on interpolation between data reported by national government. Reported data excluded. 101 percent greater than 100 percent. GoC=D+
- 2010: Estimate based on interpolation between data reported by national government. Reported data excluded. 111 percent greater than 100 percent. GoC=D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on interpolation between data reported by national government. Reported data excluded. 104 percent greater than 100 percent. Estimate of 98 percent changed from previous revision value of 99 percent. GoC=D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - DTP1



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	99	99	98	95	96	97	93	95	96	98	99	93
Estimate GoC	•	•	•	•	•	•	••	••	••	•	••	••
Official	101	92	114	95	117	97	93	95	108	103	99	93
Administrative	NA	92	114	95	117	97	93	95	108	103	99	93
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.

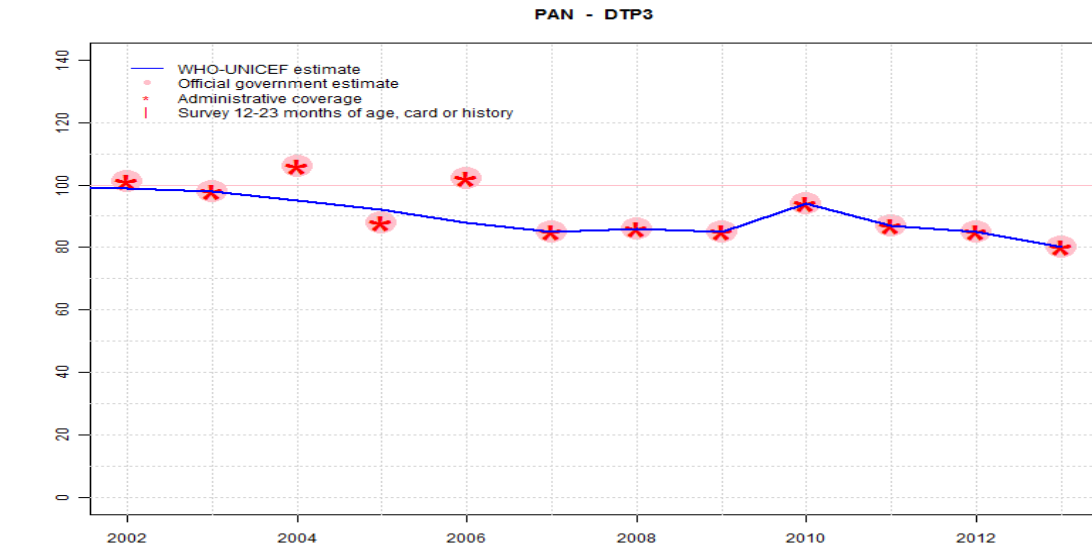
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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: DTP1 coverage estimated based on DTP3 coverage of 99. Reported data excluded. 101 percent greater than 100 percent. Estimate challenged by: R-
- 2003: DTP1 coverage estimated based on DTP3 coverage of 98. Estimate challenged by: R-
- 2004: DTP1 coverage estimated based on DTP3 coverage of 95. Reported data excluded. 114 percent greater than 100 percent. Reported data excluded. Unexplained increase from 92 percent to 114 percent with decrease 95 percent. Estimate challenged by: R-
- 2005: Estimate based on interpolation between data reported by national government. Reported data excluded. Decline in reported coverage from 114 percent to 95 percent with increase to 117 percent. Denominator based on number of children receiving BCG. Estimate challenged by: D-
- 2006: Estimate based on interpolation between data reported by national government. Reported data excluded. 117 percent greater than 100 percent. Reported data excluded. Unexplained increase from 95 percent to 117 percent with decrease 97 percent. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on interpolation between data reported by national government. Reported data excluded. 108 percent greater than 100 percent. GoC=D+
- 2011: Estimate based on interpolation between data reported by national government. Reported data excluded. 103 percent greater than 100 percent. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - DTP3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	99	98	95	92	88	85	86	85	94	87	85	80
Estimate GoC	•	•	•	•	•	••	••	••	•	••	••	••
Official	101	98	106	88	102	85	86	85	94	87	85	80
Administrative	101	98	106	88	102	85	86	85	94	87	85	80
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.

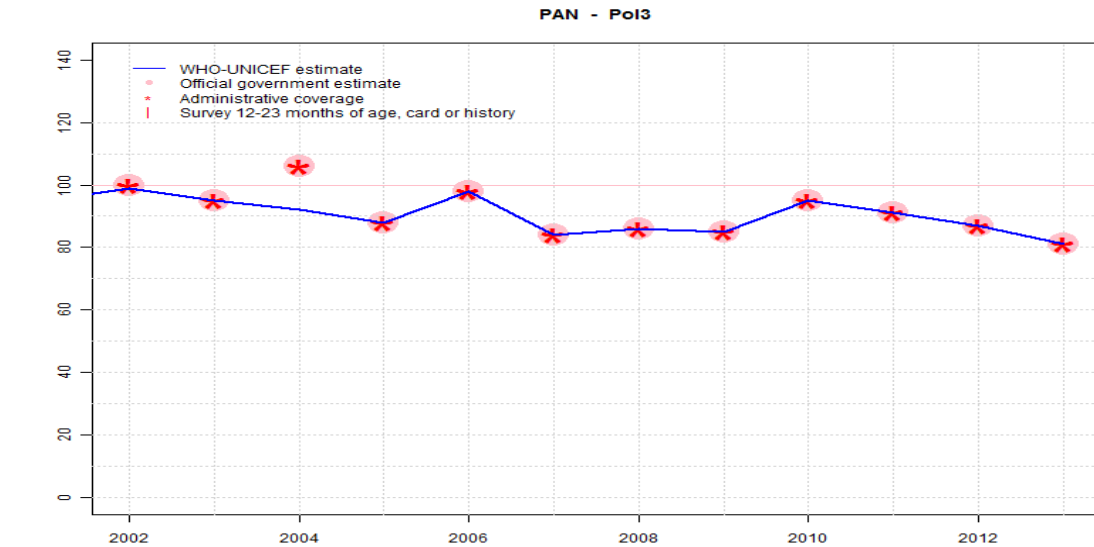
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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 data reported by national government. Reported data excluded. 101 percent greater than 100 percent. GoC=No accepted empirical data
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on interpolation between data reported by national government. Reported data excluded. 106 percent greater than 100 percent. Estimate challenged by: D-
- 2005: Estimate based on interpolation between data reported by national government. Reported data excluded. Decline in reported coverage from 106 percent to 88 percent with increase to 102 percent. Denominator based on number of children receiving BCG. Estimate challenged by: D-
- 2006: Estimate based on interpolation between data reported by national government. Reported data excluded. 102 percent greater than 100 percent. Reported data excluded. Unexplained increase from 88 percent to 102 percent with decrease 85 percent. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - Pol3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	99	95	92	88	98	84	86	85	95	91	87	81
Estimate GoC	●●	●	●●	●	●	●●	●●	●●	●	●●	●●	●●
Official	100	95	106	88	98	84	86	85	95	91	87	81
Administrative	100	95	106	88	98	84	86	85	95	91	87	81
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.

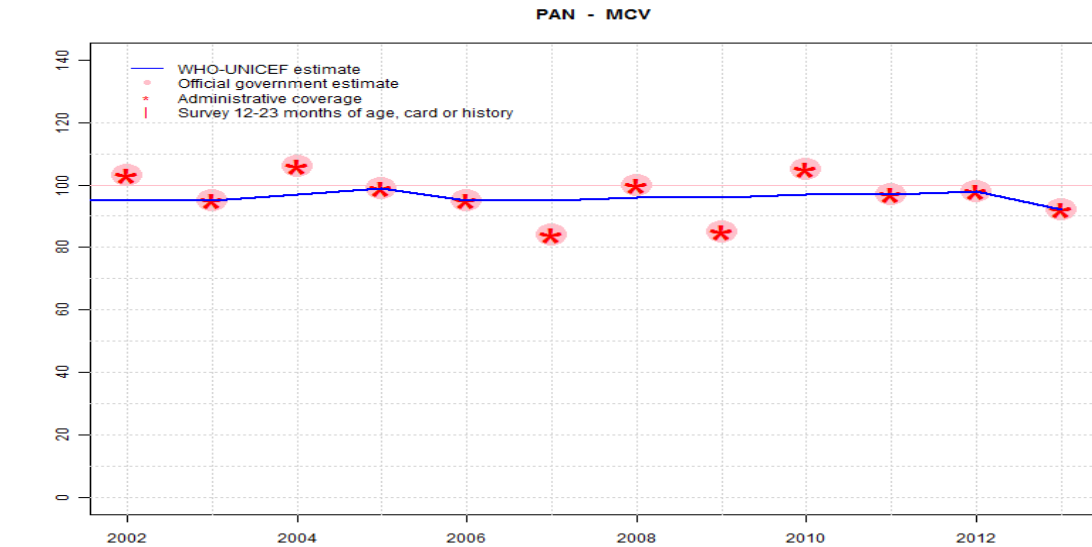
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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 coverage reported by national government. GoC=R+
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on interpolation between data reported by national government. Reported data excluded. 106 percent greater than 100 percent. Reported data excluded. Unexplained increase from 95 percent to 106 percent with decrease 88 percent. GoC=D+
- 2005: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - MCV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	95	95	97	99	95	84	100	85	105	97	98	92
Estimate GoC	•	•	•	••	•	•	•	•	••	••	••	••
Official	103	95	106	99	95	84	100	85	105	97	98	92
Administrative	103	95	106	99	95	84	100	85	105	97	98	92
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.

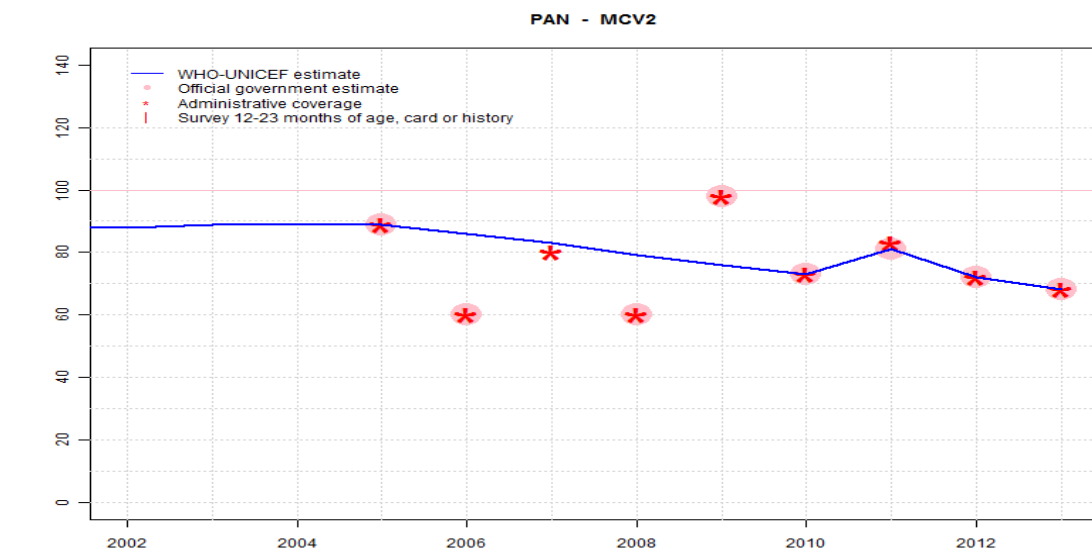
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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 data reported by national government. Reported data excluded. 103 percent greater than 100 percent. GoC=No accepted empirical data
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on interpolation between data reported by national government. Reported data excluded. 106 percent greater than 100 percent. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on interpolation between data reported by national government. Reported data excluded. Decline in reported coverage from 95 percent to 84 percent with increase to 100 percent. Denominator based on number of children receiving BCG. Estimate challenged by: D-
- 2008: Estimate based on interpolation between data reported by national government. Reported data excluded. Unexplained increase from 84 percent to 100 percent with decrease 85 percent. Denominator based on number of children receiving BCG. Estimate challenged by: D-
- 2009: Estimate based on interpolation between data reported by national government. Reported data excluded. Decline in reported coverage from 100 percent to 85 percent with increase to 105 percent. Estimate challenged by: D-
- 2010: Estimate based on interpolation between data reported by national government. Reported data excluded. 105 percent greater than 100 percent. GoC=D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - MCV2



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	88	89	89	89	86	83	79	76	73	81	72	68
Estimate GoC	•	•	•	•	•	•	•	•	••	••	••	••
Official	NA	NA	NA	89	60	NA	60	98	73	81	72	68
Administrative	NA	NA	NA	89	60	80	60	98	73	83	72	68
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

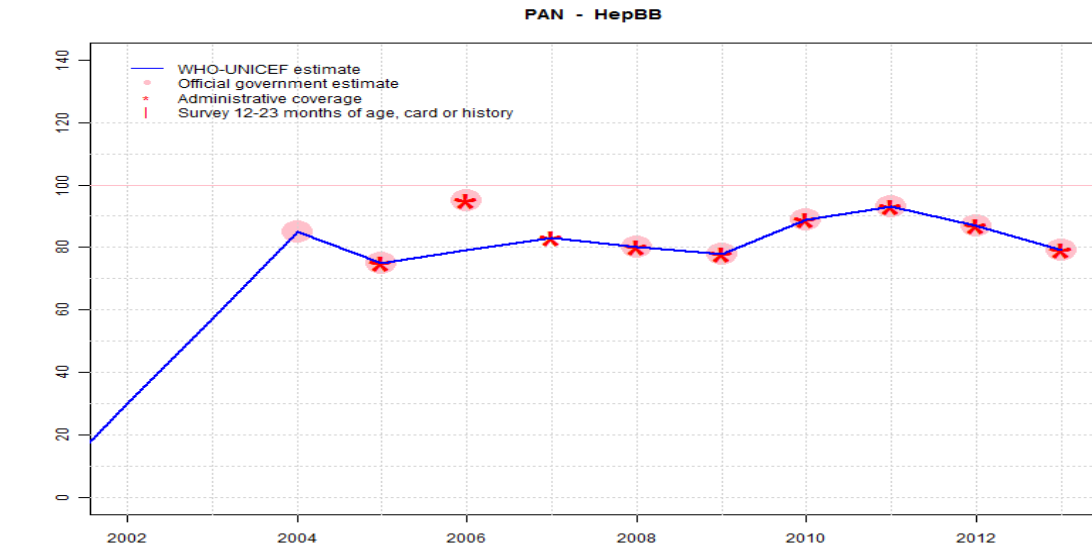
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

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

- 2002: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2003: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2004: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on interpolation between reported values. Reported data excluded. Decline in reported coverage from 89 percent to 60 percent with increase to 80 percent. Estimate challenged by: D-
- 2007: Estimate based on interpolation between reported values. Reported data excluded. Unexplained increase from 60 percent to 80 percent with decrease 60 percent. Estimate challenged by: D-
- 2008: Estimate based on interpolation between reported values. Reported data excluded. Decline in reported coverage from 80 percent to 60 percent with increase to 98 percent. Estimate challenged by: D-
- 2009: Estimate based on interpolation between reported values. Reported data excluded. Unexplained increase from 60 percent to 98 percent with decrease 73 percent. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - HepBB



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	30	57	85	75	79	83	80	78	89	93	87	79
Estimate GoC	•	•	••	••	•	•	••	••	•	••	••	••
Official	NA	NA	85	75	95	NA	80	78	89	93	87	79
Administrative	NA	NA	NA	75	95	83	80	78	89	93	87	79
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.

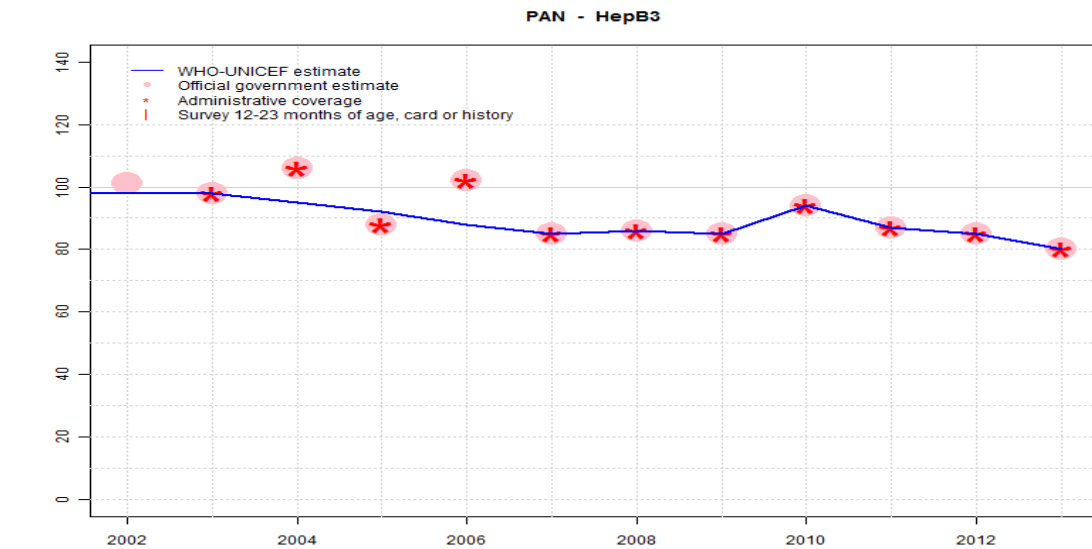
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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. GoC=No accepted empirical data
- 2003: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2004: Estimate based on coverage reported by national government. GoC=R+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on interpolation between reported values. Reported data excluded. Unexplained increase from 75 percent to 95 percent with decrease 83 percent. Estimate challenged by: D-
- 2007: Estimate based on reported administrative estimate. Estimate challenged by: 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. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - HepB3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	98	98	95	92	88	85	86	85	94	87	85	80
Estimate GoC	●	●	●	●	●	●●	●●	●●	●	●●	●●	●●
Official	101	98	106	88	102	85	86	85	94	87	85	80
Administrative	NA	98	106	88	102	85	86	85	94	87	85	80
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.

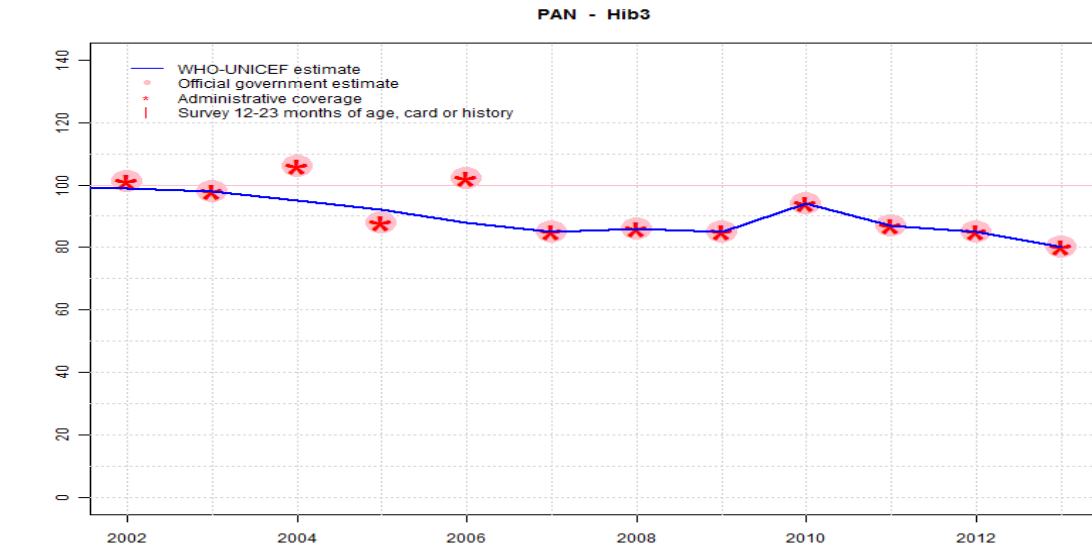
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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 extrapolation from data reported by national government. Reported data excluded. 101 percent greater than 100 percent. GoC=No accepted empirical data
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on interpolation between reported values. Reported data excluded. 106 percent greater than 100 percent. Estimate challenged by: D-
- 2005: Estimate based on interpolation between reported values. Reported data excluded. Decline in reported coverage from 106 percent to 88 percent with increase to 102 percent. Denominator based on number of children receiving BCG. Estimate challenged by: D-
- 2006: Estimate based on interpolation between reported values. Reported data excluded. 102 percent greater than 100 percent. Reported data excluded. Unexplained increase from 88 percent to 102 percent with decrease 85 percent. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - Hib3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	99	98	95	92	88	85	86	85	94	87	85	80
Estimate GoC	●	●	●	●	●	●●	●●	●●	●	●●	●●	●●
Official	101	98	106	88	102	85	86	85	94	87	85	80
Administrative	101	98	106	88	102	85	86	85	94	87	85	80
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.

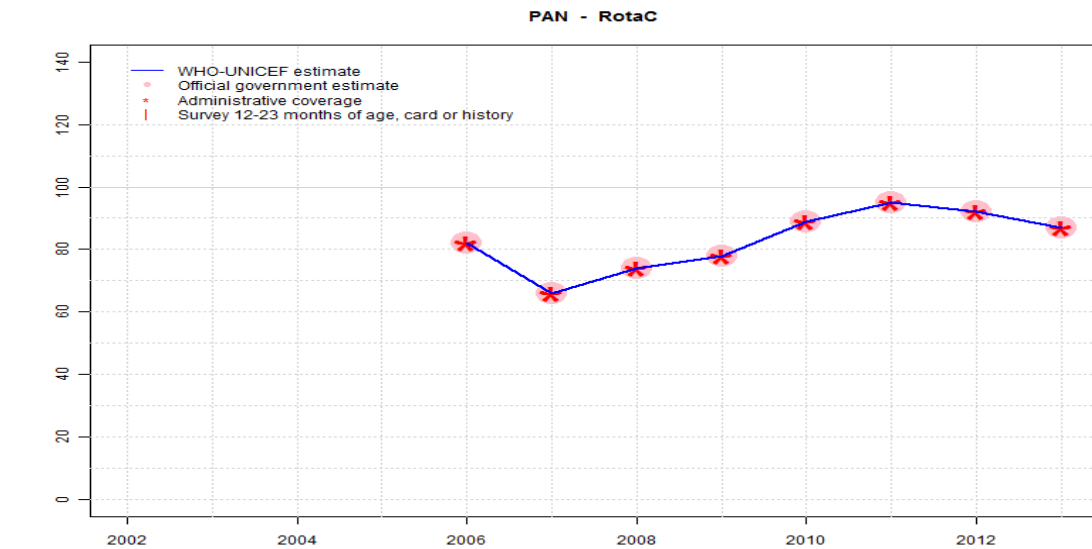
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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. 101 percent greater than 100 percent. GoC=No accepted empirical data
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on interpolation between reported values. Reported data excluded. 106 percent greater than 100 percent. Estimate challenged by: D-
- 2005: Estimate based on interpolation between reported values. Reported data excluded. Decline in reported coverage from 106 percent to 88 percent with increase to 102 percent. Denominator based on number of children receiving BCG. Estimate challenged by: D-
- 2006: Estimate based on interpolation between reported values. Reported data excluded. 102 percent greater than 100 percent. Reported data excluded. Unexplained increase from 88 percent to 102 percent with decrease 85 percent. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Denominator based on number of children receiving BCG. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - RotaC



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	82	66	74	78	89	95	92	87
Estimate GoC	NA	NA	NA	NA	●●	●●	●●	●●	●	●●	●●	●●
Official	NA	NA	NA	NA	82	66	74	78	89	95	92	87
Administrative	NA	NA	NA	NA	82	66	74	78	89	95	92	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.

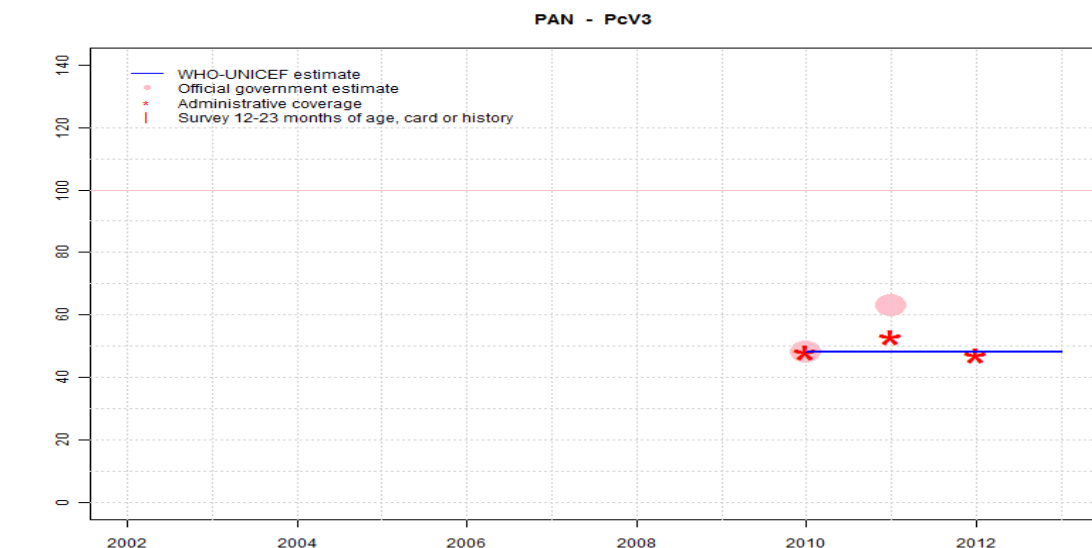
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2006: Estimate based on coverage reported by national government. GoC=R+
- 2007: Estimate based on coverage reported by national government. GoC=R+
- 2008: Estimate based on coverage reported by national government. Rotavirus vaccine introduced in 2006. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

Panama - PcV3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	48	48	48	48
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	••	••	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	48	63	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	48	53	47	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

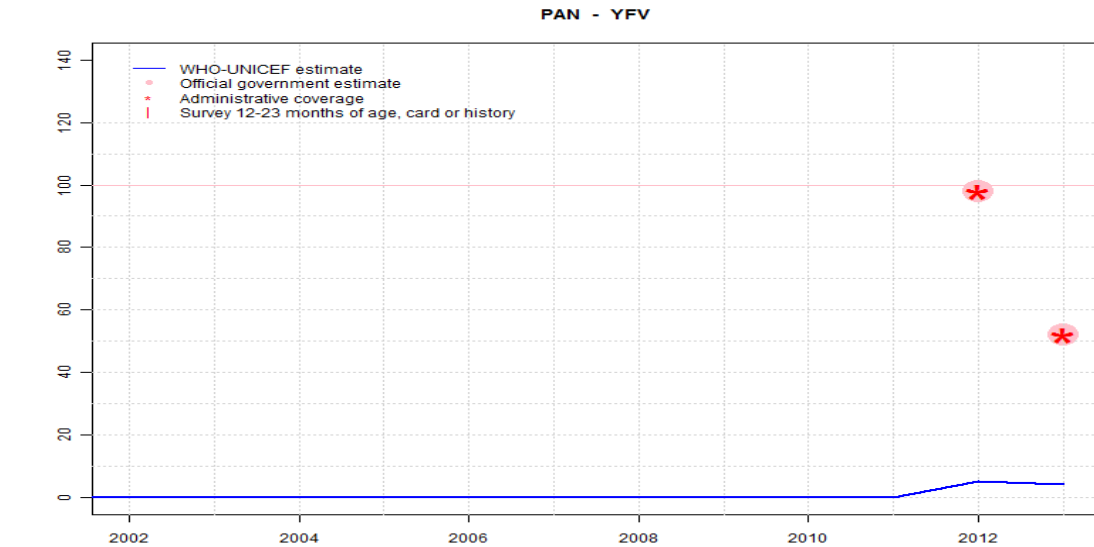
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

Description:

- 2010: Estimate based on coverage reported by national government. Pneumococcal conjugate vaccine introduced in 2010. GoC=R+ D+
- 2011: Estimate based on extrapolation from data reported by national government. Reported data excluded. Unexplained increase from 48 percent to 63 percent with decrease 47 percent. GoC=D+
- 2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. Changes in PcV schedule affected data reporting and coverage calculation. Reported data excluded. Decline in reported coverage from 63 level to 47 percent. Estimate challenged by: D-
- 2013: Estimate based on extrapolation from data 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. Changes in PcV schedule affected data reporting and coverage calculation. GoC=No accepted empirical data

Panama - YFV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	0	0	0	0	0	0	0	0	0	0	5	4
Estimate GoC	•	•	•	•	•	••	••	•	•	••	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98	52
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	98	52
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: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. GoC=No accepted empirical data
- 2003: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. GoC=No accepted empirical data
- 2004: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. GoC=No accepted empirical data
- 2005: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. Estimate challenged by: D-
- 2006: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. Estimate challenged by: D-
- 2007: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. GoC=D+
- 2008: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. GoC=D+
- 2009: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. GoC=No accepted empirical data
- 2010: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. Estimate challenged by: D-
- 2011: YFV introduced in 1974 for areas at risk. Data available are not sufficient to produce an estimate. GoC=D+
- 2012: Ninety eight percent coverage achieved in five percent of the total population. Estimate challenged by: R-
- 2013: Fifty two percent coverage reached in seven percent of the national birth cohort. Reported data excluded. Change in reported coverage from 98 level to 52 percent. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: R-

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