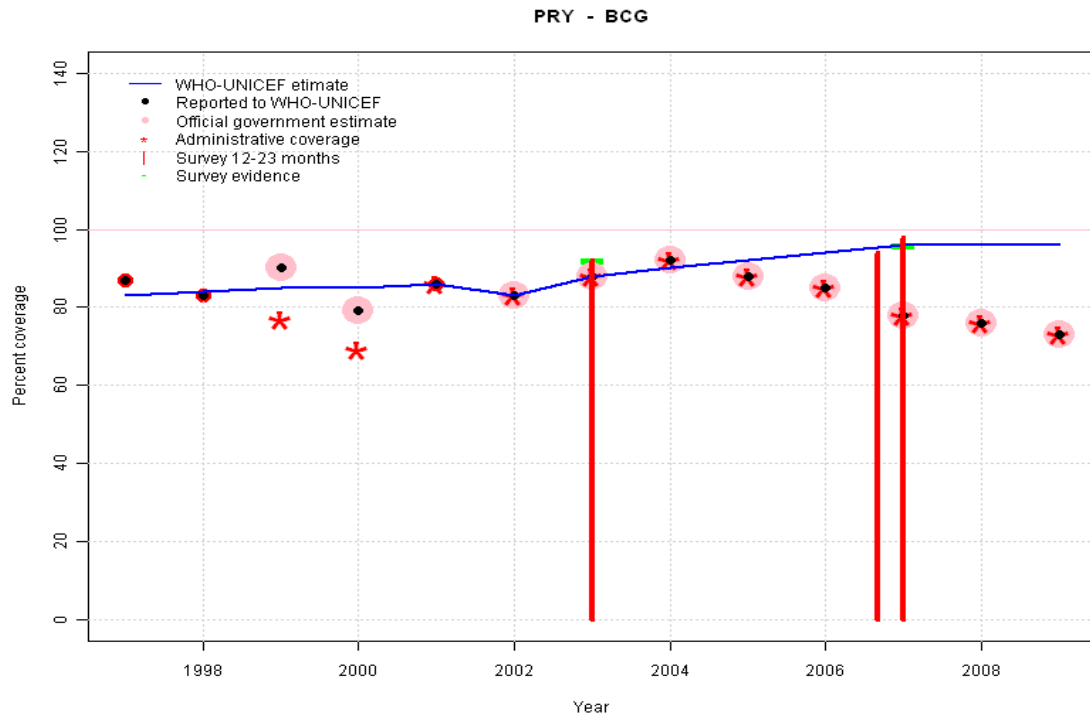


Paraguay - BCG

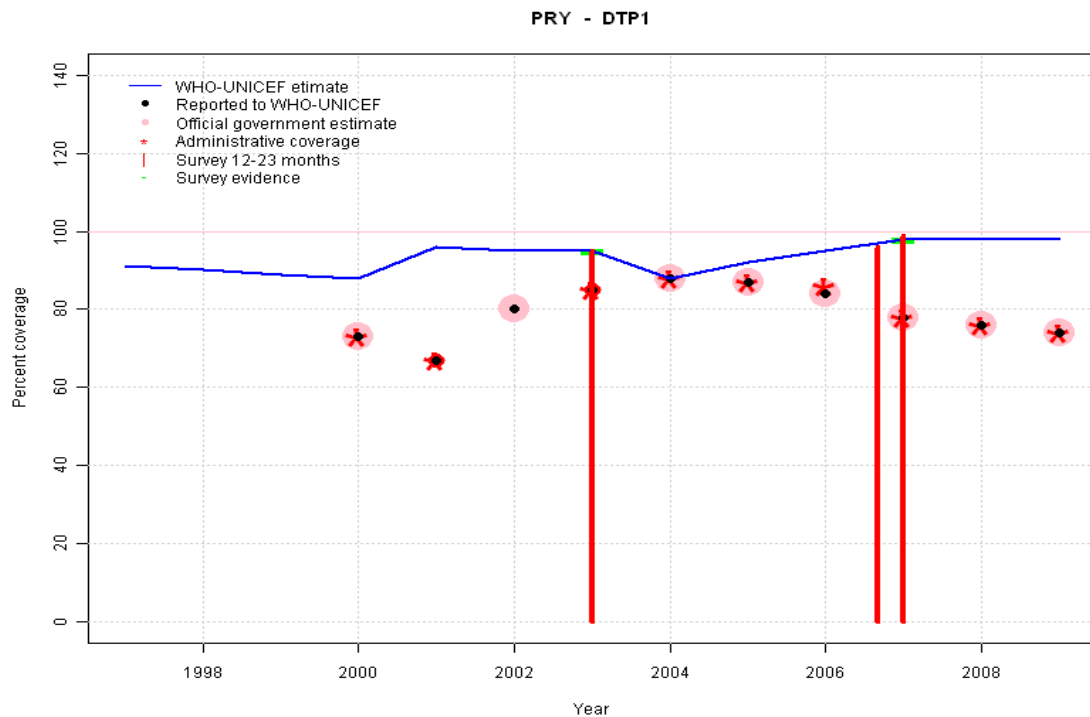


Description:

- 1997: Legacy estimate.
- 1998: Estimate based on working group decision to interpolated between 1997 and 2001. Interpolation from 1995 survey results.
- 1999: Estimate based on working group decision to interpolated between 1997 and 2001. Interpolation from 1995 survey results.
- 2000: Estimate based on working group decision to interpolated between 1997 and 2001. Interpolation from 1995 survey results.
- 2001: Survey supports reported data from 2001
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data (88 percent) confirmed by survey (92 percent).
- 2004: Estimate interpolated between 2003 and 2007 estimates.
- 2005: Estimate interpolated between 2003 and 2007 estimates.
- 2006: Estimate interpolated between 2003 and 2007 estimates.
- 2007: Estimate based on survey results. Reported data (78 percent) not consistent with survey results (96 percent). 2 surveys, results = 94, 98, mean = 96 percent.
- 2008: Estimate extrapolated from 2007 level (96 percent).
- 2009: Estimate extrapolated from 2007 level (96 percent). An in-depth assessment of data quality suggested higher coverage than reported. Estimate of births are under review by the National Statistical Office.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	83	84	85	85	86	83	88	90	92	94	96	96	96
Reported	87	83	90	79	86	83	88	92	88	85	78	76	73
Official	NA	NA	90	79	NA	83	88	92	88	85	78	76	73
Administrative	NA	NA	77	69	86	83	88	92	88	85	78	76	73
Survey	NA	NA	NA	NA	NA	NA	92	NA	NA	NA	96	NA	NA

Paraguay - DTP1

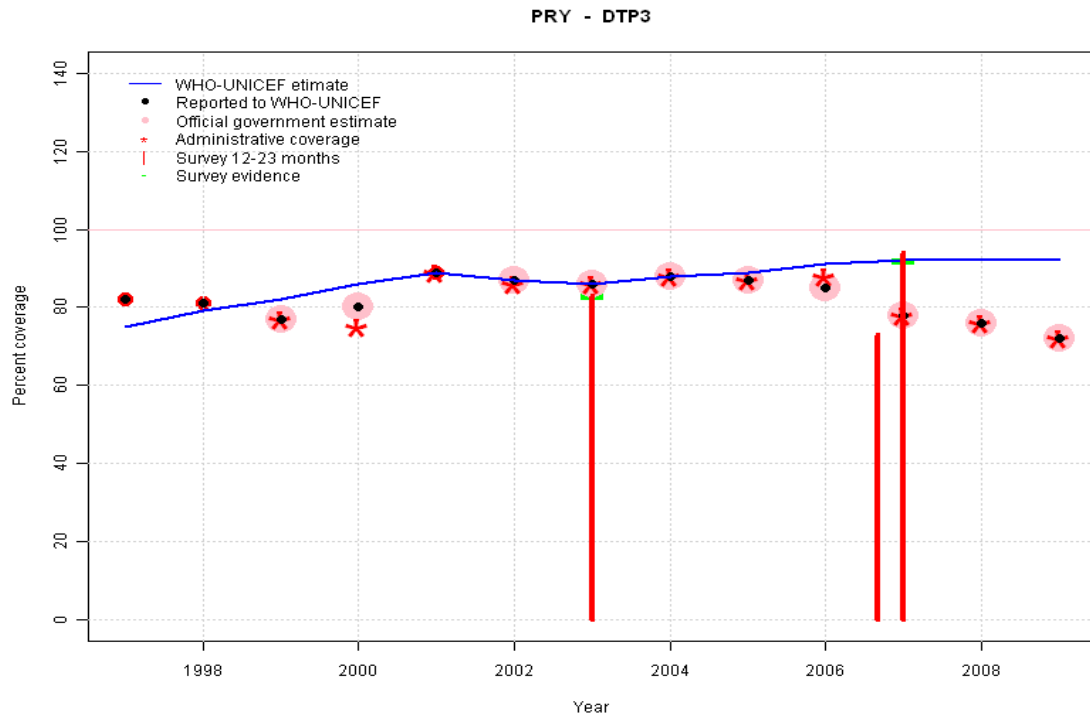


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	91	90	89	88	96	95	95	88	92	95	98	98	98
Reported	NA	NA	NA	73	67	80	85	88	87	84	78	76	74
Official	NA	NA	NA	73	NA	80	NA	88	87	84	78	76	74
Administrative	NA	NA	NA	73	67	NA	85	88	87	86	78	76	74
Survey	NA	NA	NA	NA	NA	NA	95	NA	NA	NA	98	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 2003 estimates.
- 1999: Estimate interpolated between 1997 and 2003 estimates.
- 2000: Estimate interpolated between 1997 and 2003 estimates.
- 2001: Estimated DTP3 greater than estimated DTP1; DTP1 estimate based on the relationship between DTP1 and DTP3 from 282 surveys.
- 2002: Estimated DTP3 greater than estimated DTP1; DTP1 estimate based on the relationship between DTP1 and DTP3 from 282 surveys.
- 2003: Estimated DTP3 greater than estimated DTP1; DTP1 estimate based on the relationship between DTP1 and DTP3 from 282 surveys.
- 2004: Estimate interpolated between 2003 and 2007 estimates.
- 2005: Estimate interpolated between 2003 and 2007 estimates.
- 2006: Estimate interpolated between 2003 and 2007 estimates.
- 2007: Estimate based on survey results. Reported data (78 percent) not consistent with survey results (98 percent). 2 surveys, results = 96, 99, mean = 98 percent.
- 2008: Estimate extrapolated from 2007 level (98 percent).
- 2009: Estimate extrapolated from 2007 level (98 percent). An in-depth assessment of data quality suggested higher coverage than reported. Estimate of births are under review by the National Statistical Office.

Paraguay - DTP3



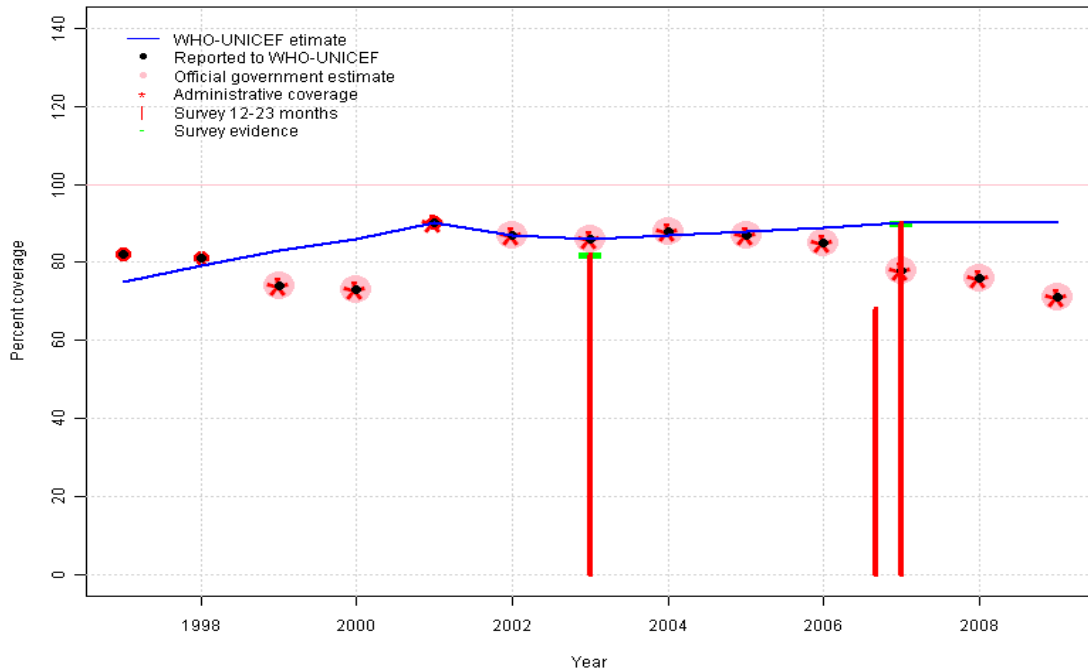
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	75	79	82	86	89	87	86	88	89	91	92	92	92
Reported	82	81	77	80	89	87	86	88	87	85	78	76	72
Official	NA	NA	77	80	NA	87	86	88	87	85	78	76	72
Administrative	NA	NA	77	75	89	86	86	88	87	88	78	76	72
Survey	NA	NA	NA	NA	NA	NA	83	NA	NA	NA	92	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate based on working group decision to interpolated between 1997 and 2001. Interpolation from 1995 survey results.
- 1999: Estimate based on working group decision to interpolated between 1997 and 2001. Interpolation from 1995 survey results.
- 2000: Estimate based on working group decision to interpolated between 1997 and 2001. Interpolation from 1995 survey results.
- 2001: Survey supports reported data from 2001
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data (86 percent) confirmed by survey (83 percent).
- 2004: Estimate interpolated between 2003 and 2007 estimates.
- 2005: Estimate interpolated between 2003 and 2007 estimates.
- 2006: Estimate interpolated between 2003 and 2007 estimates.
- 2007: Estimate based on survey results. Reported data (78 percent) not consistent with survey results (92 percent). 2 surveys, results = 89, 95, mean = 92 percent. Survey results (73 percent) adjusted for recall bias to 89 percent based on first dose card or history coverage (96 percent) and documented drop-out between first (65 percent) and third (60 percent) doses. Survey results (94 percent) adjusted for recall bias to 95 percent based on first dose card or history coverage (99 percent) and documented drop-out between first (71 percent) and third (68 percent) doses.
- 2008: Estimate extrapolated from 2007 level (92 percent).
- 2009: Estimate extrapolated from 2007 level (92 percent). An in-depth assessment of data quality suggested higher coverage than reported. Estimate of births are under review by the National Statistical Office.

Paraguay - Pol3

PRY - Pol3

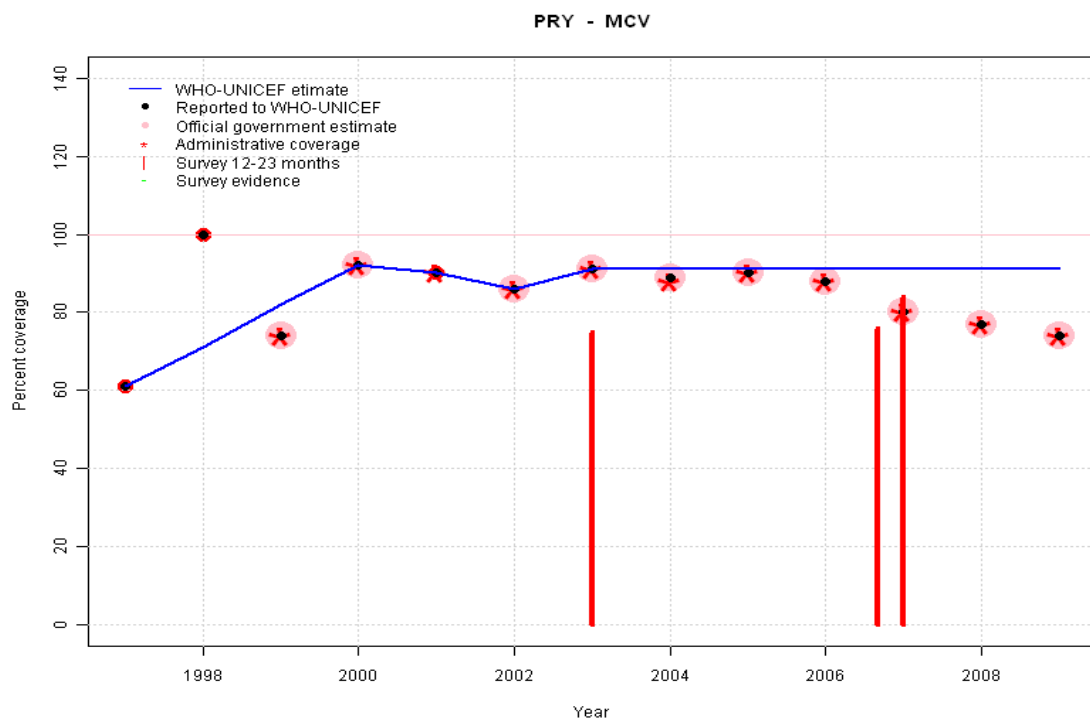


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	75	79	83	86	90	87	86	87	88	89	90	90	90
Reported	82	81	74	73	90	87	86	88	87	85	78	76	71
Official	NA	NA	74	73	NA	87	86	88	87	85	78	76	71
Administrative	NA	NA	74	73	90	87	86	88	87	85	78	76	71
Survey	NA	NA	NA	NA	NA	NA	82	NA	NA	NA	90	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate based on working group decision to interpolated between 1997 and 2001. Interpolation from 1995 survey results.
- 1999: Estimate based on working group decision to interpolated between 1997 and 2001. Interpolation from 1995 survey results.
- 2000: Estimate based on working group decision to interpolated between 1997 and 2001. Interpolation from 1995 survey results.
- 2001: Survey supports reported data from 2001
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data (86 percent) confirmed by survey (82 percent).
- 2004: Estimate interpolated between 2003 and 2007 estimates.
- 2005: Estimate interpolated between 2003 and 2007 estimates.
- 2006: Estimate interpolated between 2003 and 2007 estimates.
- 2007: Estimate based on survey results. Reported data (78 percent) not consistent with survey results (90 percent). 2 surveys, results = 85, 95, mean = 90 percent. Survey results (68 percent) adjusted for recall bias to 85 percent based on first dose card or history coverage (92 percent) and documented drop-out between first (63 percent) and third (58 percent) doses. Survey results (90 percent) adjusted for recall bias to 95 percent based on first dose card or history coverage (96 percent) and documented drop-out between first (68 percent) and third (67 percent) doses.
- 2008: Estimate extrapolated from 2007 level (90 percent).
- 2009: Estimate extrapolated from 2007 level (90 percent). An in-depth assessment of data quality suggested higher coverage than reported. Estimate of births are under review by the National Statistical Office.

Paraguay - MCV



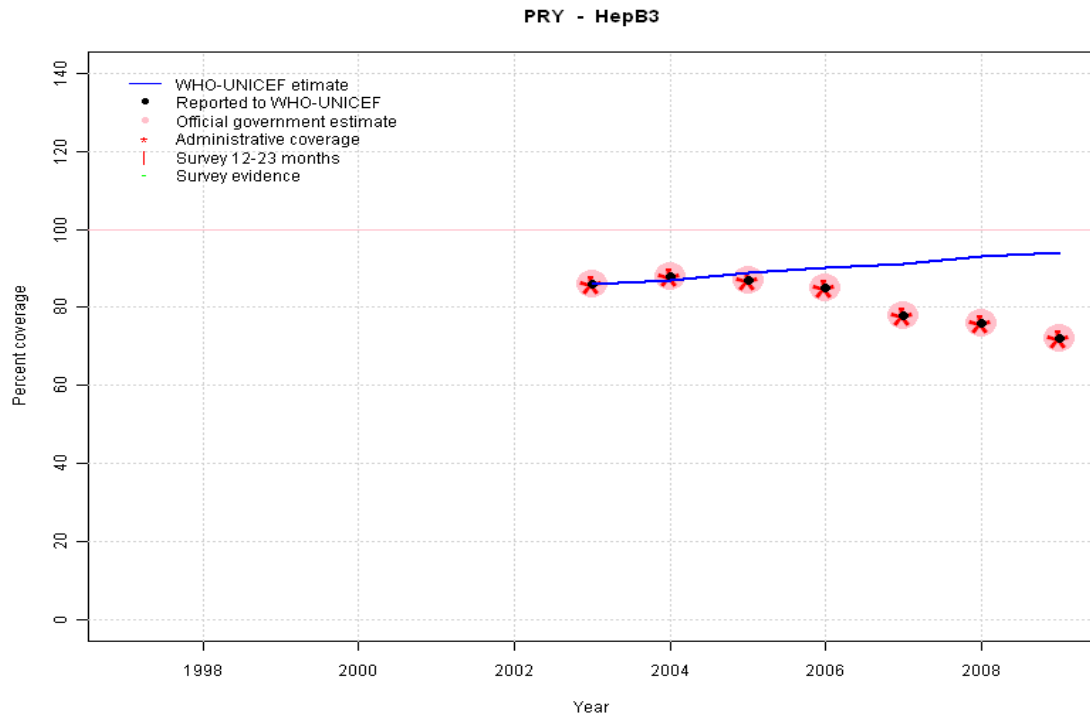
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	61	71	82	92	90	86	91	91	91	91	91	91	91
Reported	61	100	74	92	90	86	91	89	90	88	80	77	74
Official	NA	NA	74	92	NA	86	91	89	90	88	80	77	74
Administrative	NA	NA	74	92	90	86	91	88	90	88	80	77	74
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 61 percent in 1997 and 92 percent in 2000. 1998 reported data (100 percent) inconsistent with data from other years.
- 1999: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 61 percent in 1997 and 92 percent in 2000. 1999 reported data (74 percent) inconsistent with data from other years.
- 2000: Estimate based on reported data.
- 2001: Estimate based on reported data.
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data. Survey results of 75 percent ignored by working group. Measles vaccination is recommended between 12 and 23 months of age. Survey cohort under-estimates coverage.
- 2004: Estimate based on working group decision to interpolated between 2003 and 2009. Estimate based on 2003 reported data. 2003 reported data supported by survey for other vaccines.
- 2005: Estimate based on working group decision to interpolated between 2003 and 2009. Estimate based on 2003 reported data. 2003 reported data supported by survey for other vaccines.
- 2006: Estimate based on working group decision to interpolated between 2003 and 2009. Estimate based on 2003 reported data. 2003 reported data supported by survey for other vaccines.
- 2007: Estimate based on working group decision to interpolated between 2003 and 2009. Estimate based on 2003 reported data. 2003 reported data supported by survey for other vaccines. Survey results of 76 percent ignored by working group. Measles vaccine is recommended at age 12-23 months of age. Survey results underestimate coverage. Survey results of 84 percent ignored by working group. Measles vaccine is recommended at age 12-23 months of age. Survey results underestimate coverage.
- 2008: Estimate based on working group decision to interpolated between 2003 and 2009. Estimate based on 2003 reported data. 2003 reported data supported by survey for other vaccines.
- 2009: Administrative coverage based on population estimate under review. An in-depth assessment of data quality suggested higher coverage than reported. Estimate of births are under review by the National Statistical Office.

Paraguay - HepB3

Description:



2003: HepB vaccine delivered in combination DTP-HepB-Hib vaccine. Estimate based on DTP3 levels HepB introduced in 2002. Reporting started in 2003. Vaccine presentation is DTP-HepB-Hib.

2004: Estimate interpolated between 2003 and 2009 estimates.

2005: Estimate interpolated between 2003 and 2009 estimates.

2006: Estimate interpolated between 2003 and 2009 estimates.

2007: Estimate interpolated between 2003 and 2009 estimates.

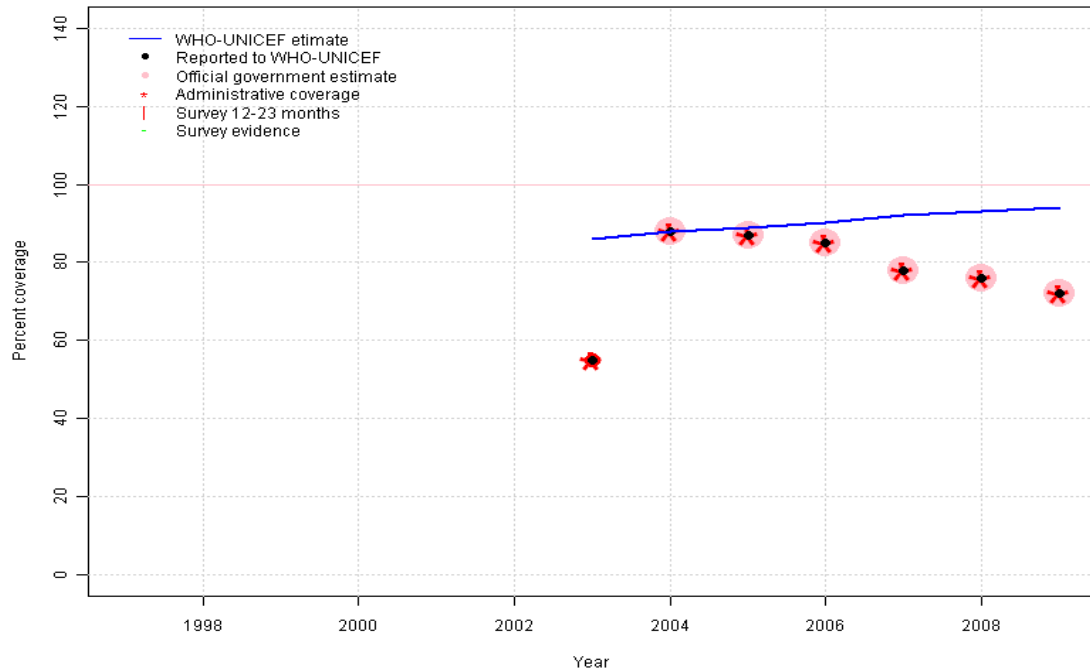
2008: Estimate interpolated between 2003 and 2009 estimates.

2009: HepB vaccine delivered in combination DTP-HepB-Hib vaccine. Estimate based on DTP3 levels An in-depth assessment of data quality suggested higher coverage than reported. Estimate of births are under review by the National Statistical Office.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	86	87	89	90	91	93	94
Reported	NA	NA	NA	NA	NA	NA	86	88	87	85	78	76	72
Official	NA	NA	NA	NA	NA	NA	86	88	87	85	78	76	72
Administrative	NA	NA	NA	NA	NA	NA	86	88	87	85	78	76	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Paraguay - Hib3

PRY - Hib3

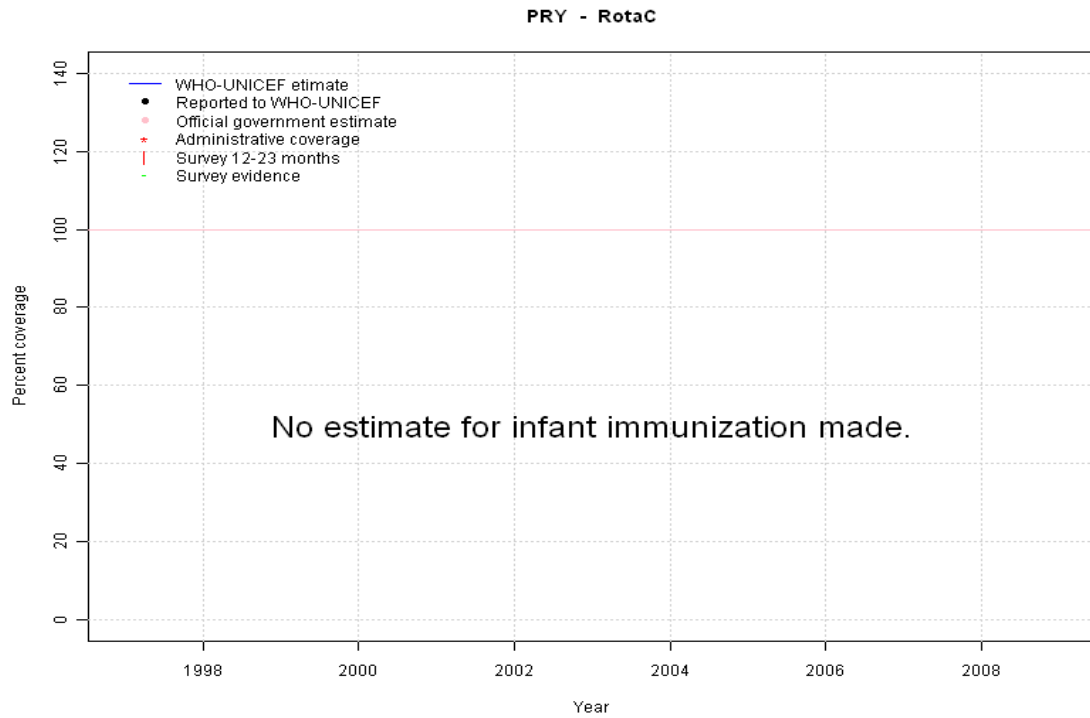


Description:

- 2003: Hib vaccine delivered in combination DTP-HepB-Hib vaccine. Estimate based on DTP3 levels Hib introduced in 2002. Reporting started in 2003. Vaccine presentation is DTP-HepB-Hib.
- 2004: Estimate based on DTP3 estimate.
- 2005: Estimate interpolated between 2004 and 2009 estimates.
- 2006: Estimate interpolated between 2004 and 2009 estimates.
- 2007: Estimate interpolated between 2004 and 2009 estimates.
- 2008: Estimate interpolated between 2004 and 2009 estimates.
- 2009: Hib vaccine delivered in combination DTP-HepB-Hib vaccine. Estimate based on DTP3 levels An in-depth assessment of data quality suggested higher coverage than reported. Estimate of births are under review by the National Statistical Office.

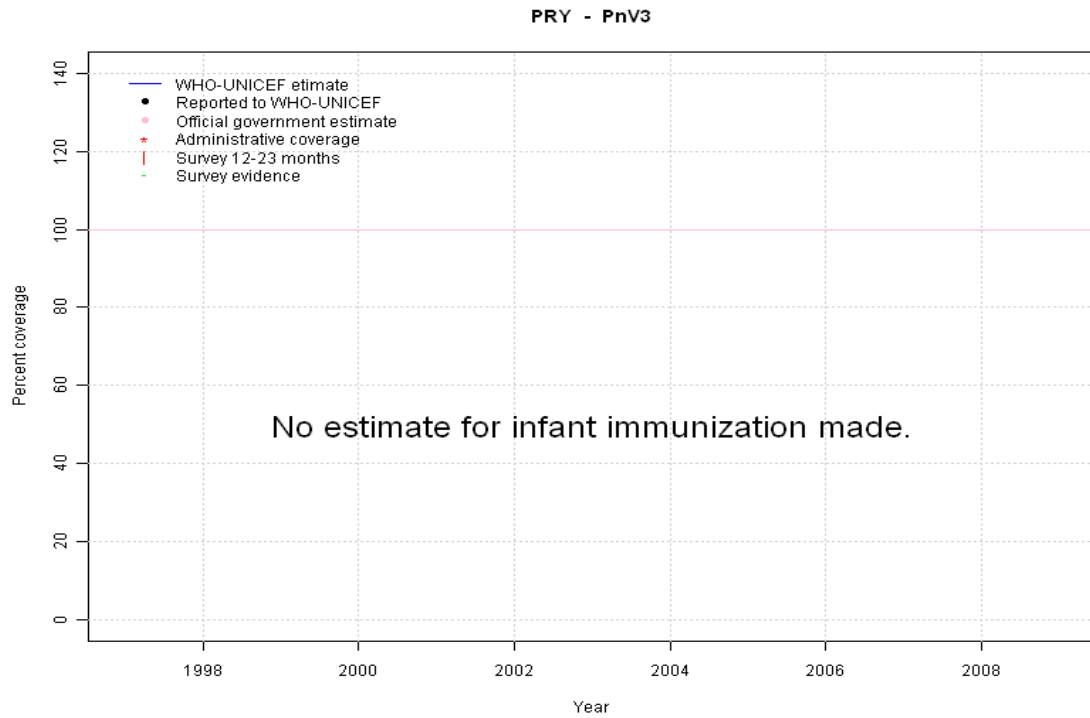
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	86	88	89	90	92	93	94
Reported	NA	NA	NA	NA	NA	NA	55	88	87	85	78	76	72
Official	NA	NA	NA	NA	NA	NA	NA	88	87	85	78	76	72
Administrative	NA	NA	NA	NA	NA	NA	55	88	87	85	78	76	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Paraguay - RotaC



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

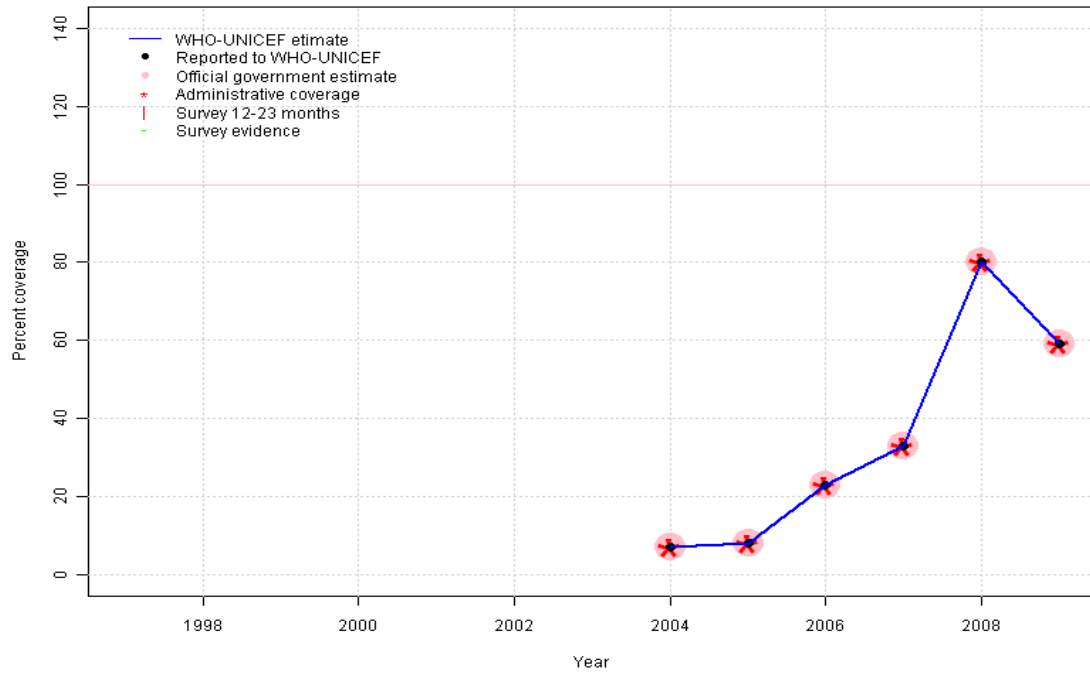
Paraguay - PnV3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Paraguay - YFV

PRY - YFV



Description:

2004: Estimate based on reported data.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

2007: Estimate based on reported data.

2008: Estimate based on reported data.

2009: Estimate based on reported data. An in-depth assessment of data quality suggested higher coverage than reported. Estimate of births are under review by the National Statistical Office.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	7	8	23	33	80	59
Reported	NA	NA	NA	NA	NA	NA	NA	7	8	23	33	80	59
Official	NA	NA	NA	NA	NA	NA	NA	7	8	23	33	80	59
Administrative	NA	NA	NA	NA	NA	NA	NA	7	8	23	33	80	59
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Paraguay - survey details

2007 Encuesta Demográfica y de Salud Familiar-ENDES Continua, 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94	18-29 m	1639	66
BCG	Card	61	18-29 m	1639	66
BCG	Card or History	94	18-29 m	1639	66
BCG	History	32	18-29 m	1639	66
DTP1	Card	65	18-29 m	1639	66
DTP1	History	31	18-29 m	1639	66
DTP1	Card or History	96	18-29 m	1639	66
DTP1	C or H <12 months	95	18-29 m	1639	66
DTP3	C or H <12 months	71	18-29 m	1639	66
DTP3	Card or History	73	18-29 m	1639	66
DTP3	History	13	18-29 m	1639	66
DTP3	Card	60	18-29 m	1639	66
MCV	History	23	18-29 m	1639	66
MCV	Card or History	76	18-29 m	1639	66
MCV	Card	53	18-29 m	1639	66
MCV	C or H <12 months	70	18-29 m	1639	66
Pol1	History	29	18-29 m	1639	66
Pol1	Card or History	92	18-29 m	1639	66
Pol1	C or H <12 months	92	18-29 m	1639	66
Pol1	Card	63	18-29 m	1639	66
Pol3	Card	58	18-29 m	1639	66
Pol3	History	10	18-29 m	1639	66
Pol3	Card or History	68	18-29 m	1639	66
Pol3	C or H <12 months	67	18-29 m	1639	66

2007 Encuesta Nacional de Demografía y Salud Sexual y Reproductiva (ENDSSR-2004)

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	71	12-23 m	427	71
BCG	Card or History	98	12-23 m	427	71
DTP1	Card or History	99	12-23 m	427	71
DTP1	Card	71	12-23 m	427	71
DTP3	Card	68	12-23 m	427	71
DTP3	Card or History	94	12-23 m	427	71
MCV	Card	59	12-23 m	427	71
MCV	Card or History	84	12-23 m	427	71
Pol1	Card or History	96	12-23 m	427	71
Pol1	Card	68	12-23 m	427	71
Pol3	Card	67	12-23 m	427	71
Pol3	Card or History	90	12-23 m	427	71

2003 Encuesta Nacional de Demografía y Salud Sexual y Reproductiva 2004 (ENDSSR-2004)

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	92	12-23 m	898	69
DTP1	Card or History	95	12-23 m	898	69
DTP3	Card or History	83	12-23 m	898	69
MCV	Card or History	75	12-23 m	898	69
Pol1	Card or History	94	12-23 m	898	69
Pol3	Card or History	82	12-23 m	898	69

Further information and estimates for 1980-1996 are available at:

http://www.childinfo.org/immunization_countryreports.html

http://www.who.int/immunization_monitoring/routine/immunization_coverage/en/index4.html

Paraguay

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 (%)
1997	67
1998	61
1999	55
2000	47
2001	39
2002	61
2003	61
2004	68
2005	78
2006	81
2007	74
2008	74
2009	74

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.