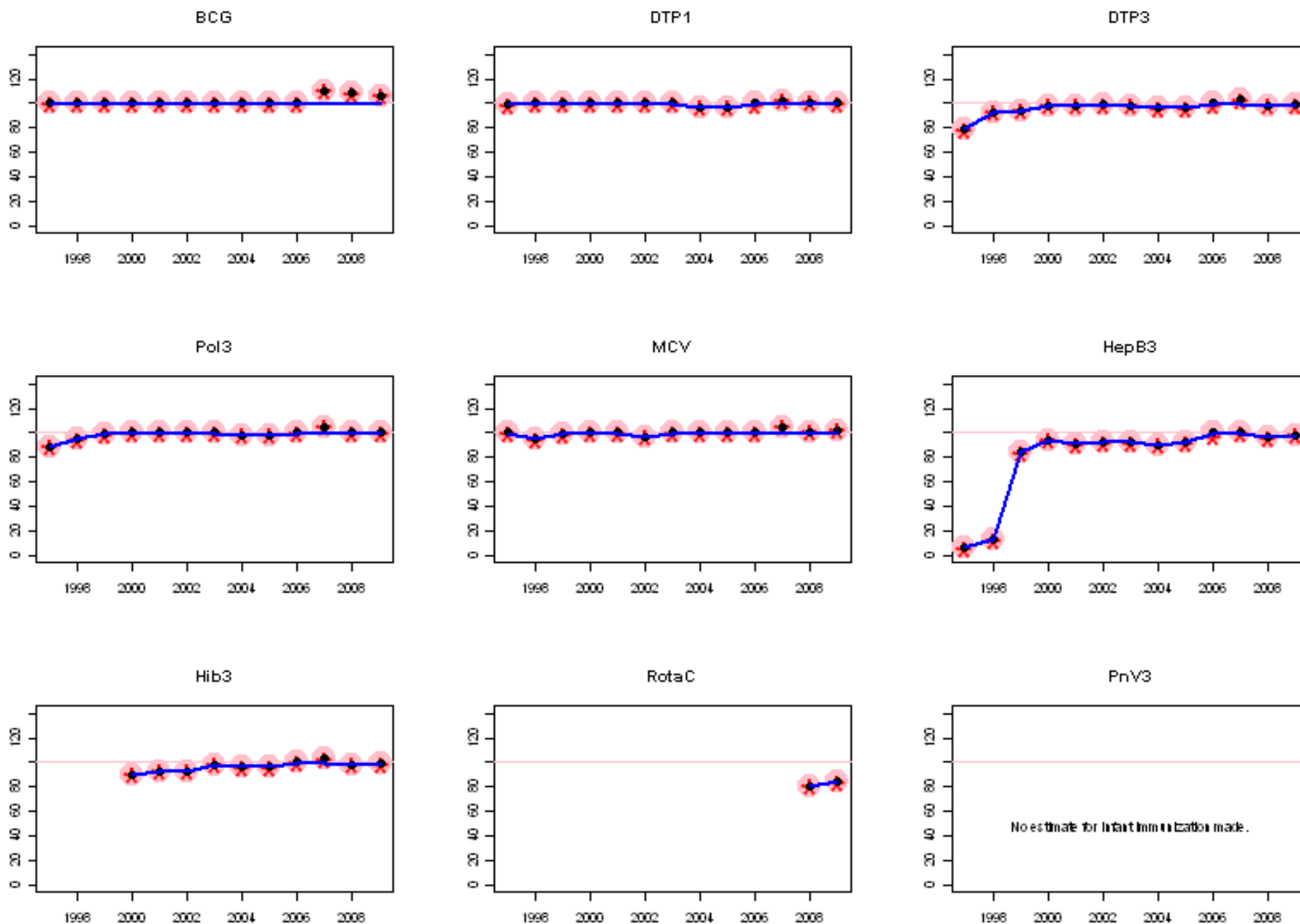
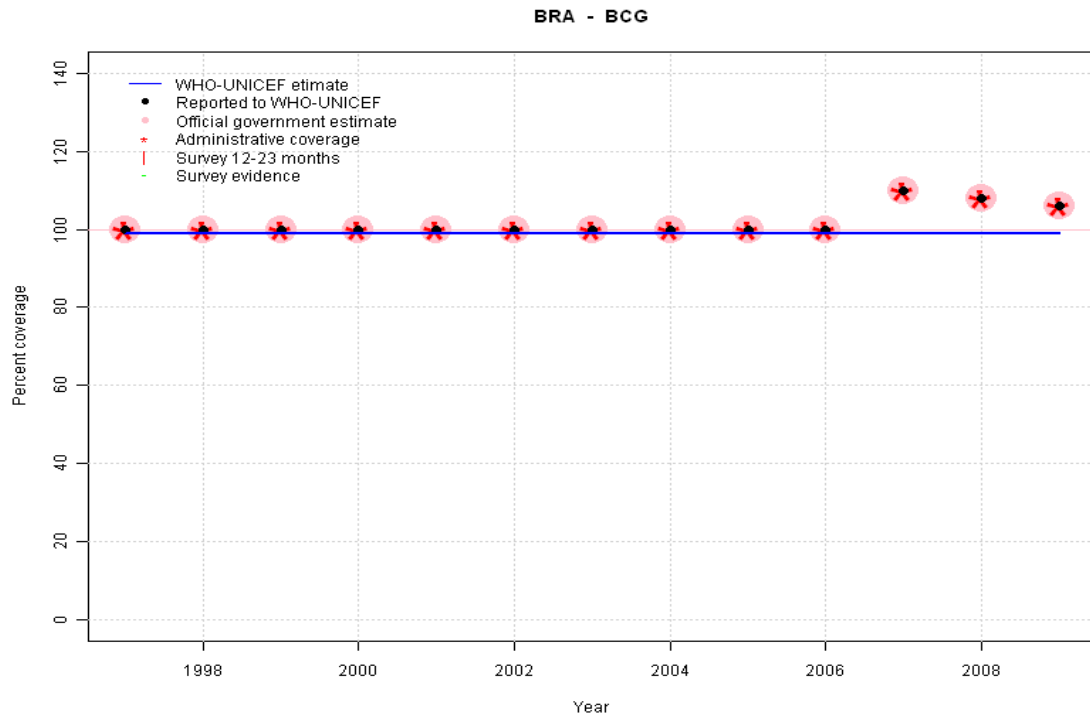


Brazil: WHO and UNICEF estimates of immunization coverage, 1997 - 2009



Brazil - BCG

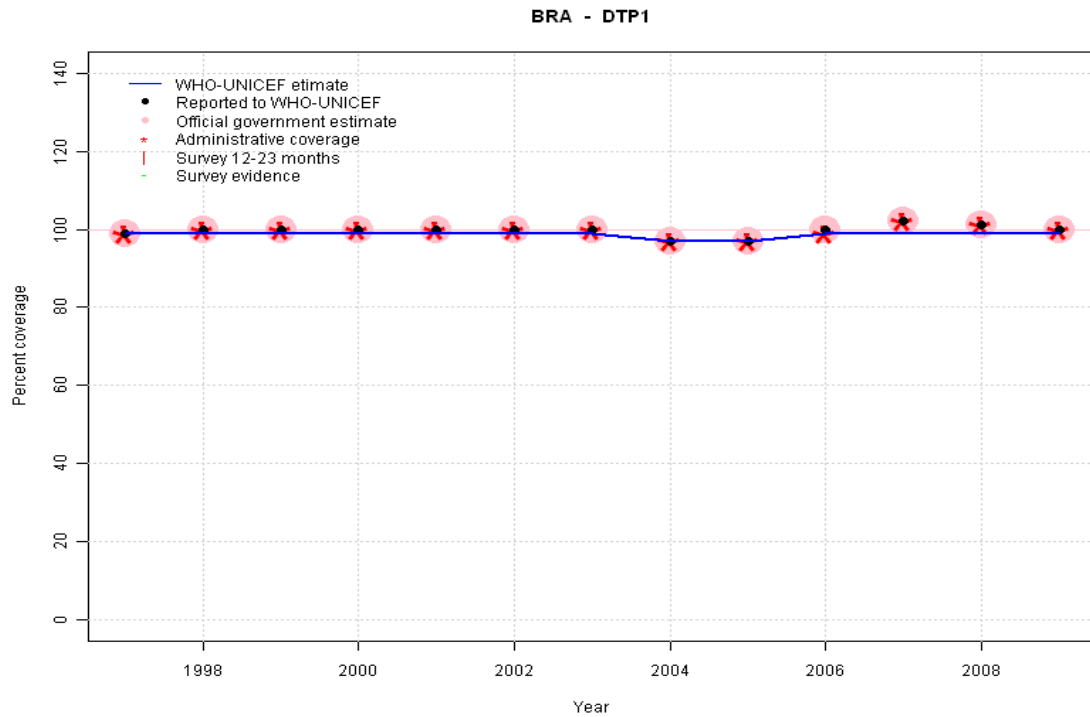


Description:

- 1997: Legacy estimate.
- 1998: Estimate based on reported data.
- 1999: Estimate based on reported data.
- 2000: Estimate based on reported data.
- 2001: Estimate based on reported data.
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data.
- 2004: Estimate based on reported data.
- 2005: Estimate based on reported data.
- 2006: Estimate based on reported data.
- 2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2006 reported value of 99 percent. 2007 reported data (110 percent) ignored; greater than 100 percent.
- 2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2006 reported value of 99 percent. 2008 reported data (108 percent) ignored; greater than 100 percent.
- 2009: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2006 reported value of 99 percent. 2009 reported data (106 percent) ignored; greater than 100 percent.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	99	99	99	99	99	99	99	99	99	99	99	99	99
Reported	100	100	100	100	100	100	100	100	100	100	110	108	106
Official	100	100	100	100	100	100	100	100	100	100	110	108	106
Administrative	100	100	100	100	100	100	100	100	100	100	110	108	106
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Brazil - DTP1



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	99	99	99	99	99	99	99	97	97	99	99	99	99
Reported	99	100	100	100	100	100	100	97	97	100	102	101	100
Official	99	100	100	100	100	100	100	97	97	100	102	101	100
Administrative	99	100	100	100	100	100	100	97	97	99	102	101	100
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on reported data.

1999: Estimate based on reported data.

2000: Estimate based on reported data.

2001: Estimate based on reported data.

2002: Estimate based on reported data.

2003: Estimate based on reported data.

2004: Estimate based on reported data.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

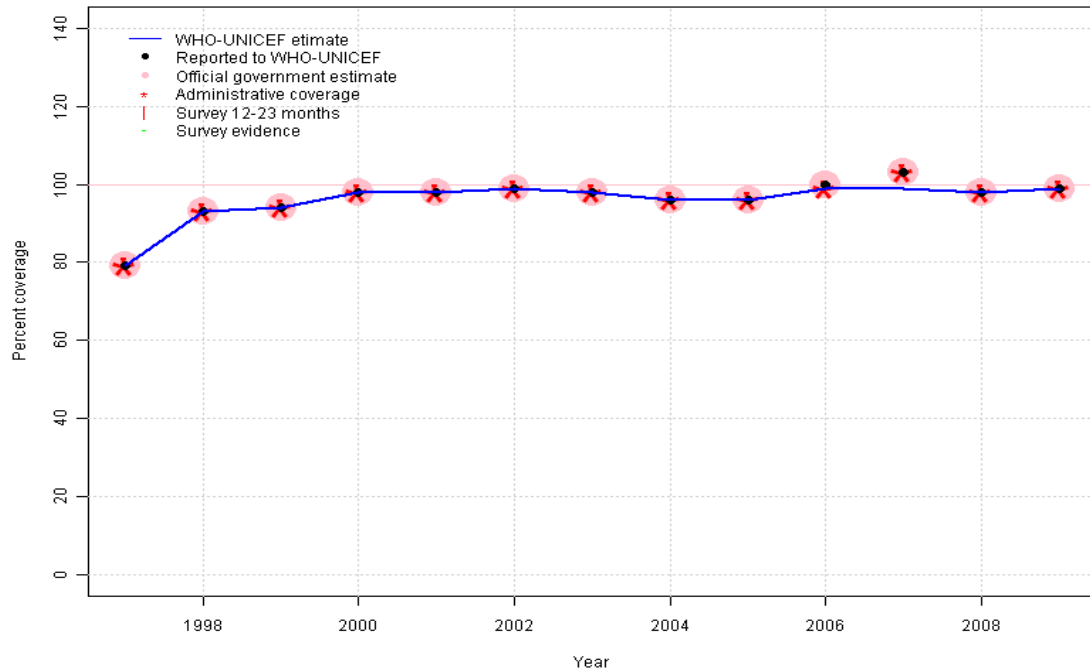
2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2006 and 100 percent in 2009. 2007 reported data (102 percent) ignored; greater than 100 percent.

2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2006 and 100 percent in 2009. 2008 reported data (101 percent) ignored; greater than 100 percent.

2009: Estimate based on reported data.

Brazil - DTP3

BRA - DTP3



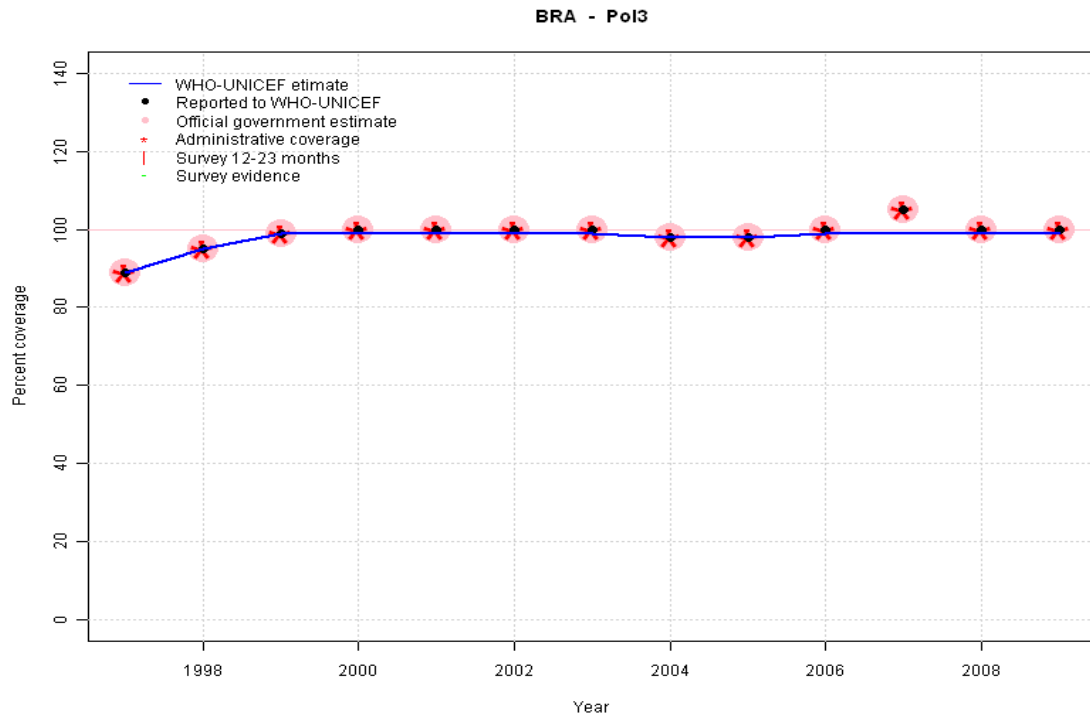
Description:

- 1997: Legacy estimate.
- 1998: Estimate based on reported data.
- 1999: Estimate based on reported data.
- 2000: Estimate based on reported data.
- 2001: Estimate based on reported data.
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data.
- 2004: Estimate based on reported data.
- 2005: Estimate based on reported data.
- 2006: Estimate based on reported data.
- 2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2006 and 98 percent in 2008. 2007 reported data (103 percent) ignored; greater than 100 percent.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	79	93	94	98	98	99	98	96	96	99	99	98	99
Reported	79	93	94	98	98	99	98	96	96	100	103	98	99
Official	79	93	94	98	98	99	98	96	96	100	103	98	99
Administrative	79	93	94	98	98	99	98	96	96	99	103	98	99
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Brazil - Pol3

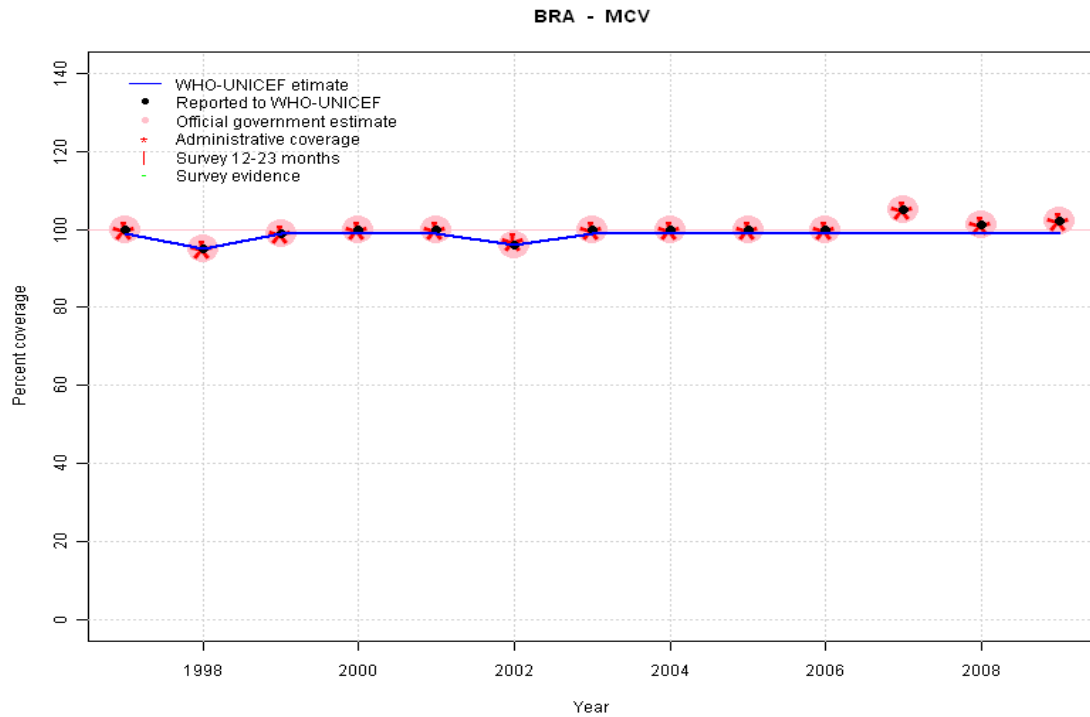
Description:



- 1997: Legacy estimate.
- 1998: Estimate based on reported data.
- 1999: Estimate based on reported data.
- 2000: Estimate based on reported data.
- 2001: Estimate based on reported data.
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data.
- 2004: Estimate based on reported data.
- 2005: Estimate based on reported data.
- 2006: Estimate based on reported data.
- 2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2006 and 100 percent in 2008. 2007 reported data (105 percent) ignored; greater than 100 percent.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	89	95	99	99	99	99	99	98	98	99	99	99	99
Reported	89	95	99	100	100	100	100	98	98	100	105	100	100
Official	89	95	99	100	100	100	100	98	98	100	105	100	100
Administrative	89	95	99	100	100	100	100	98	98	100	105	100	100
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Brazil - MCV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	99	95	99	99	99	96	99	99	99	99	99	99	99
Reported	100	95	99	100	100	96	100	100	100	100	105	101	102
Official	100	95	99	100	100	96	100	100	100	100	105	101	102
Administrative	100	95	99	100	100	97	100	100	100	100	105	101	102
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on reported data.

1999: Estimate based on reported data.

2000: Estimate based on reported data.

2001: Estimate based on reported data.

2002: Estimate based on reported data.

2003: Estimate based on reported data.

2004: Estimate based on reported data.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

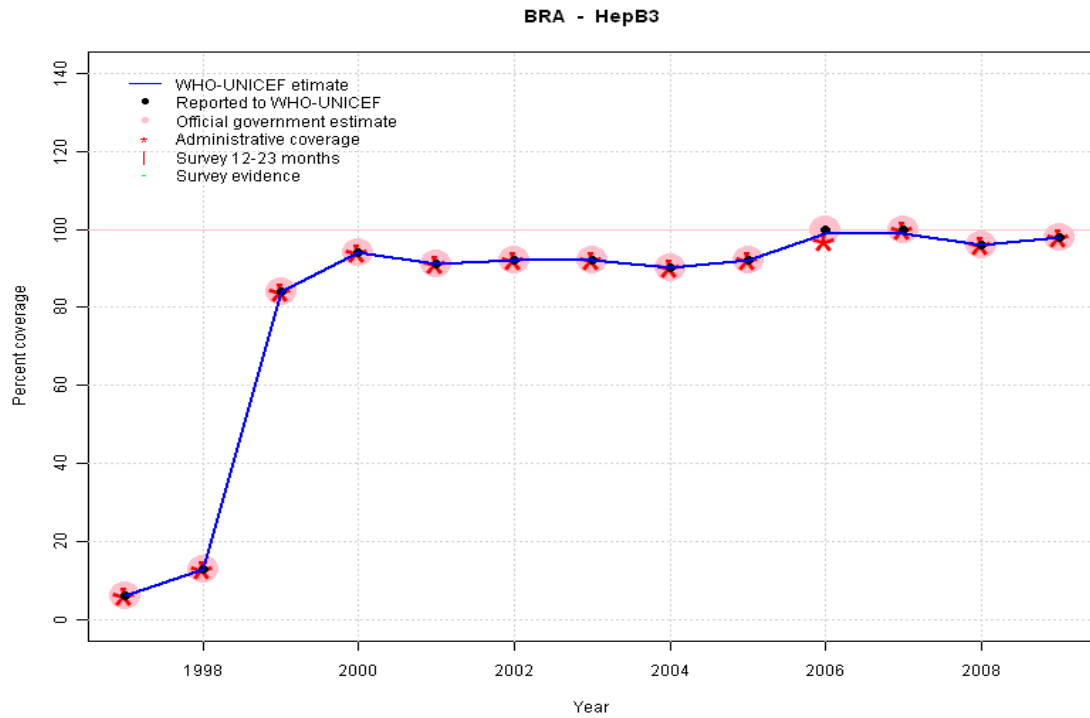
2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2006 reported value of 99 percent. 2007 reported data (105 percent) ignored; greater than 100 percent.

2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2006 reported value of 99 percent. 2008 reported data (101 percent) ignored; greater than 100 percent.

2009: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2006 reported value of 99 percent. 2009 reported data (102 percent) ignored; greater than 100 percent.

Brazil - HepB3

Description:

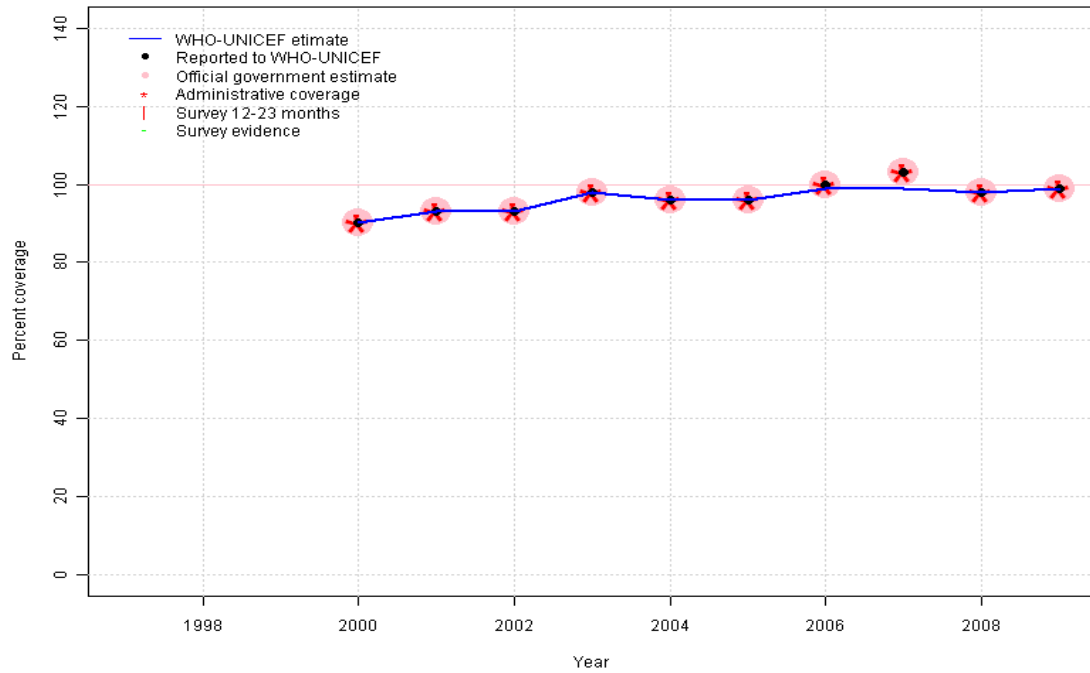


1997: Legacy estimate.
 1998: Estimate based on reported data.
 1999: Estimate based on reported data.
 2000: Estimate based on reported data.
 2001: Estimate based on reported data.
 2002: Estimate based on reported data.
 2003: Estimate based on reported data.
 2004: Estimate based on reported data.
 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.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	6	13	84	94	91	92	92	90	92	99	99	96	98
Reported	6	13	84	94	91	92	92	90	92	100	100	96	98
Official	6	13	84	94	91	92	92	90	92	100	100	96	98
Administrative	6	13	84	94	91	92	92	90	92	97	100	96	98
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Brazil - Hib3

BRA - Hib3



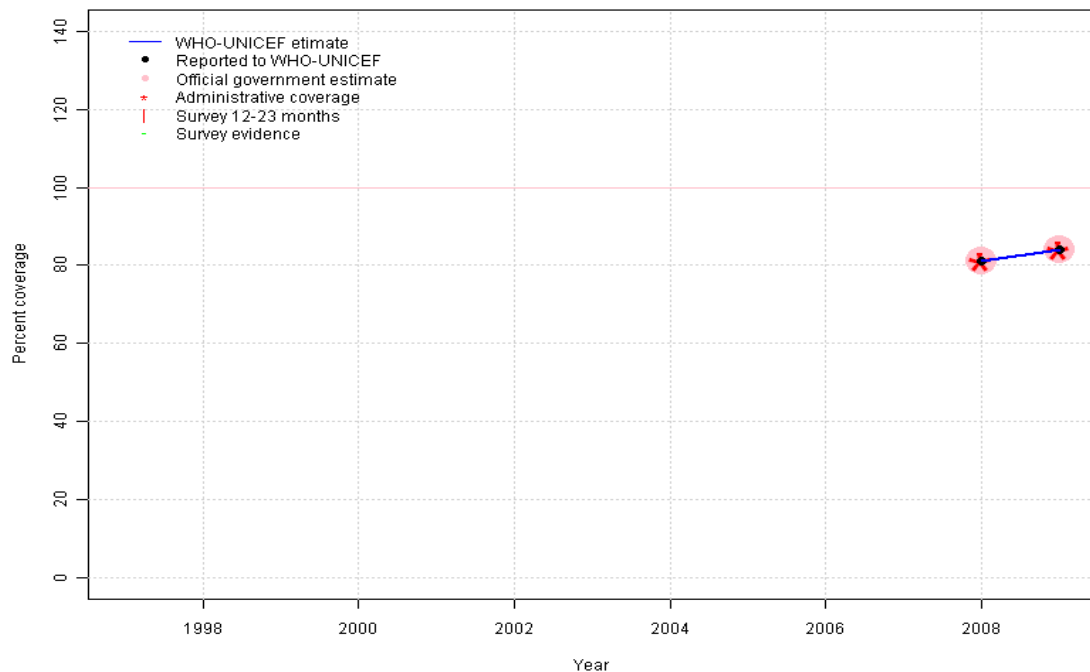
Description:

- 2000: Estimate based on reported data. Hib introduced in 1999. Reporting started in 2000. Vaccine presentation is DTB-Hib.
- 2001: Estimate based on reported data.
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data.
- 2004: Estimate based on reported data.
- 2005: Estimate based on reported data.
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2006 and 98 percent in 2008. 2007 reported data (103 percent) ignored; greater than 100 percent.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	90	93	93	98	96	96	99	99	98	99
Reported	NA	NA	NA	90	93	93	98	96	96	100	103	98	99
Official	NA	NA	NA	90	93	93	98	96	96	100	103	98	99
Administrative	NA	NA	NA	90	93	93	98	96	96	100	103	98	99
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Brazil - RotaC

BRA - RotaC



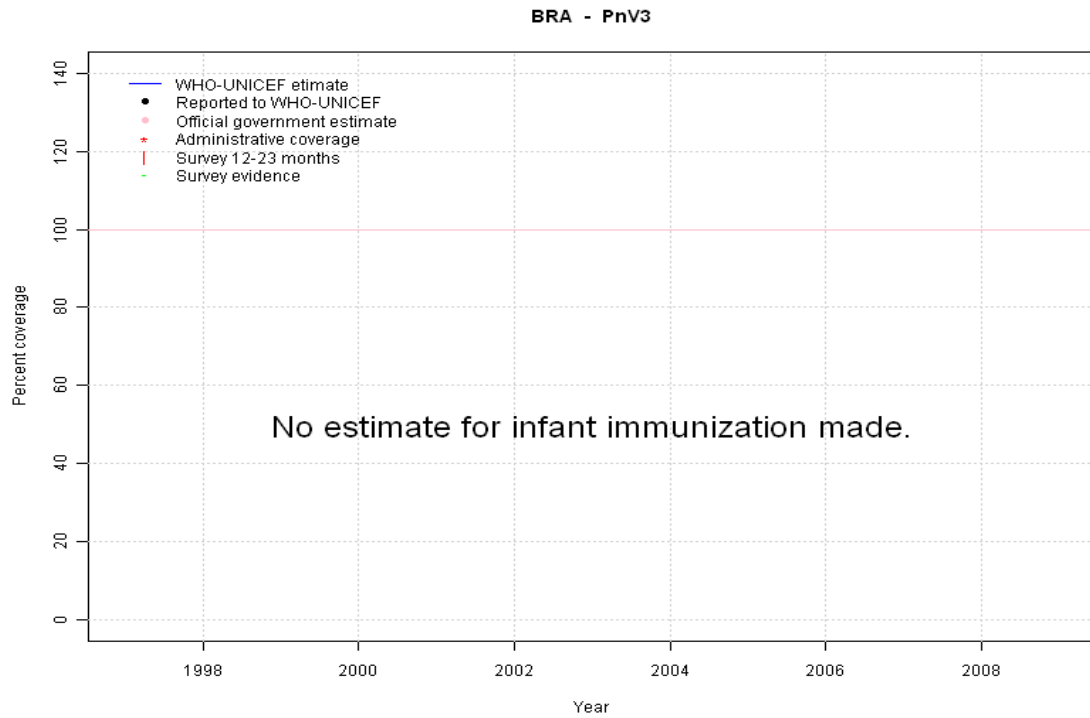
Description:

2008: Estimate based on reported data. Rota introduced in 2006 reporting started in 2008

2009: Estimate based on reported data. Rota introduced in 2006 reporting started in 2009

	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	81	84
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	84
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	84
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	84
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

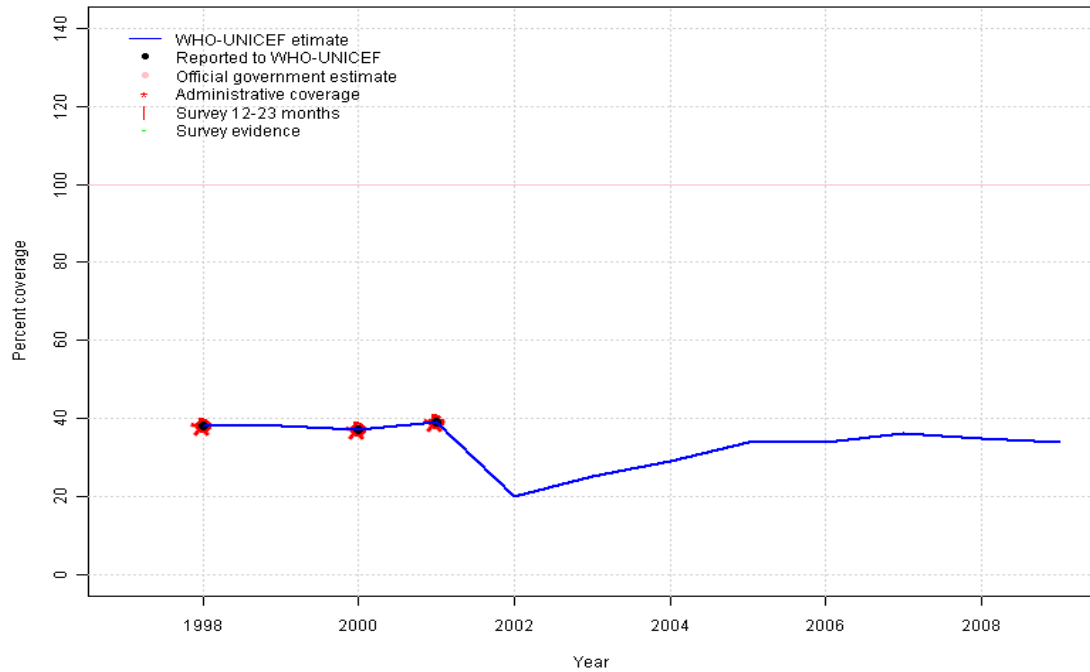
Brazil - PnV3



	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

Brazil - YFV

BRA - YFV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	38	38	37	39	20	25	29	34	34	36	35	34
Reported	NA	38	NA	37	39	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	38	NA	37	39	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Description:

- 1998: Estimate based on nationally reported data. YFV partially introduced in 1991 nationally in 1999 reporting started in 1998
- 1999: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 38 percent in 1998 and 37 percent in 2000.
- 2000: Estimate based on nationally reported data.
- 2001: Estimate based on nationally reported data.
- 2002: Twenty percent of surviving infants living in yellow fever endemic areas. Ninety-eight percent coverage achieved in these areas. No other areas were targeted.
- 2003: Estimate interpolated between 2002 and 2005 estimates.
- 2004: Estimate interpolated between 2002 and 2005 estimates.
- 2005: Twenty-seven percent of surviving infants living in yellow fever endemic areas. Ninety-two percent coverage achieved in these areas. No other areas were targeted.
- 2006: Thirty-five percent of surviving infants living in yellow fever endemic areas. Ninety-nine percent coverage achieved in these areas. No other areas were targeted.
- 2007: Thirty-five percent of surviving infants living in yellow fever endemic areas. One hundred and one percent coverage achieved in these areas. No other areas were targeted.
- 2008: Thirty-five percent of surviving infants living in yellow fever endemic areas. Ninety-eight percent coverage achieved in these areas. No other areas were targeted.
- 2009: Thirty-six percent of surviving infants living in yellow fever endemic areas. Ninety-eight percent coverage achieved in these areas. No other areas were targeted.

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

Brazil

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	83
1998	86
1999	89
2000	92
2001	92
2002	65
2003	76
2004	78
2005	67
2006	92
2007	92
2008	92
2009	92

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.