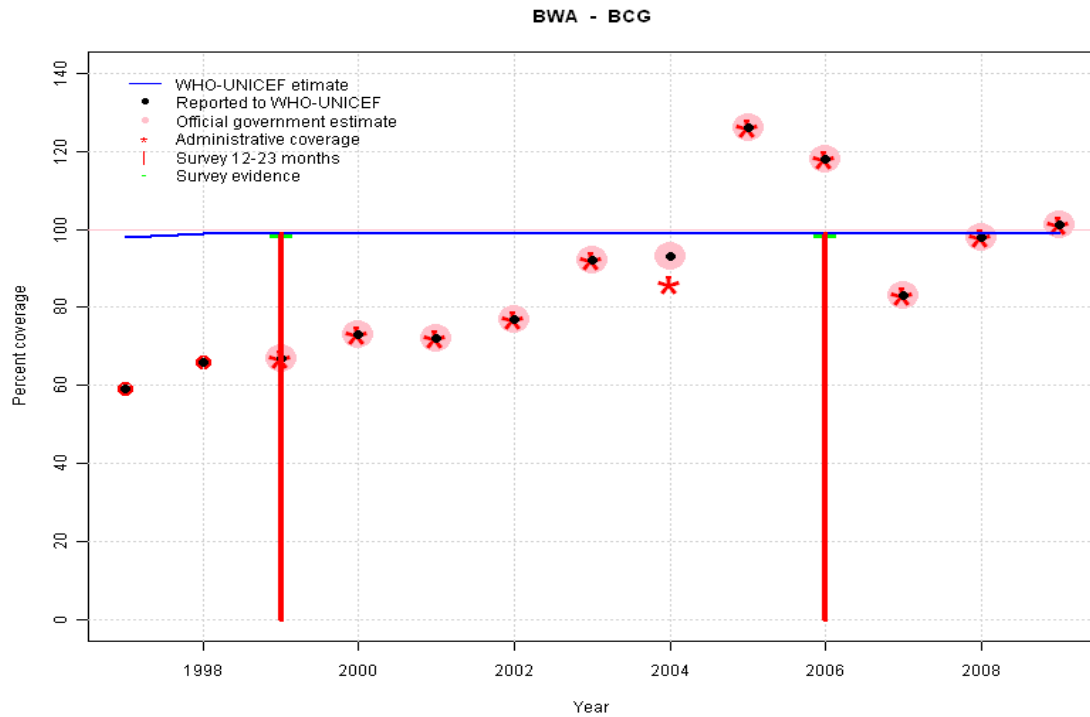


Botswana - BCG

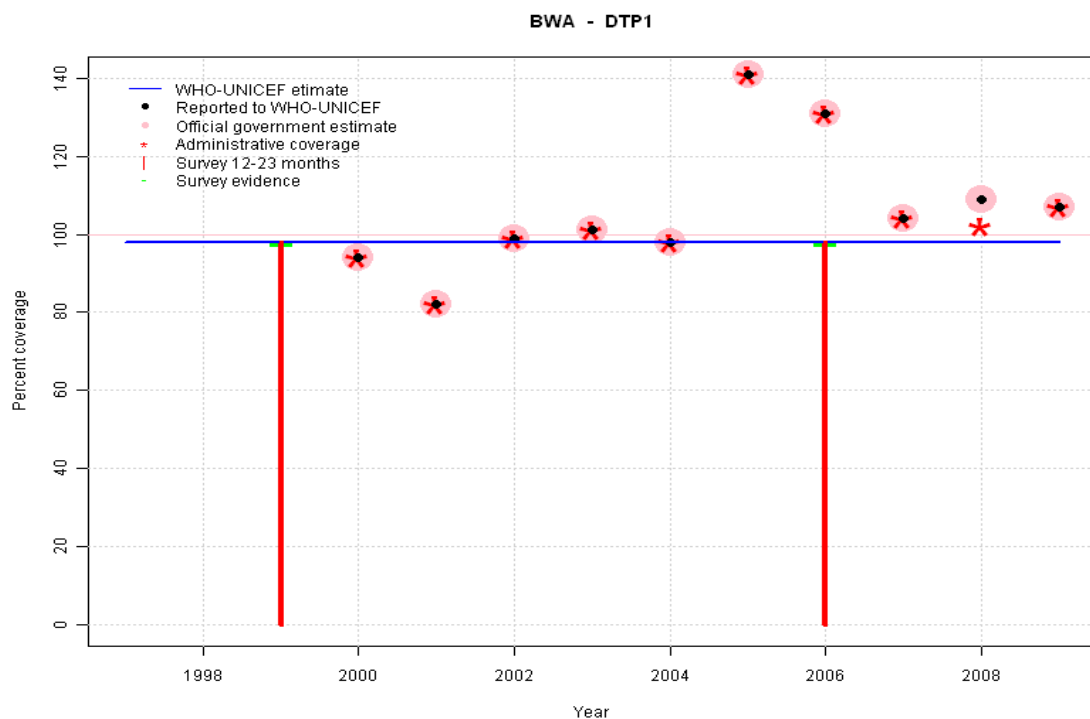


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	98	99	99	99	99	99	99	99	99	99	99	99	99
Reported	59	66	67	73	72	77	92	93	126	118	83	98	101
Official	NA	NA	67	73	72	77	92	93	126	118	83	98	101
Administrative	NA	NA	67	73	72	77	92	86	126	118	83	98	101
Survey	NA	NA	99	NA	NA	NA	NA	NA	NA	99	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Reported data (66 percent) calibrated to 1997 and 1999 levels.
- 1999: Estimate based on survey results. Reported data (67 percent) not consistent with survey results (99 percent).
- 2000: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2001: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2002: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2003: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2004: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2005: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2005 reported data (126 percent) ignored; greater than 100 percent.
- 2006: Estimate based on survey results. 2006 reported data (118 percent) ignored; greater than 100 percent.
- 2007: Estimate extrapolated from 2006 level (99 percent). 2007 reported data (83 percent) inconsistent with data from other years.
- 2008: Estimate extrapolated from 2006 level (99 percent).
- 2009: Estimate extrapolated from 2006 level (99 percent). 2009 reported data (101 percent) ignored; greater than 100 percent.

Botswana - DTP1



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	98	98	98	98	98	98	98	98	98	98	98	98	98
Reported	NA	NA	NA	94	82	99	101	98	141	131	104	109	107
Official	NA	NA	NA	94	82	99	101	98	141	131	104	109	107
Administrative	NA	NA	NA	94	82	99	101	98	141	131	104	102	107
Survey	NA	NA	98	NA	NA	NA	NA	NA	NA	98	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate interpolated between 1997 and 1999 estimates.

1999: Estimate based on survey results.

2000: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.

2001: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2001 reported data (82 percent) inconsistent with data from other years.

2002: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.

2003: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2003 reported data (101 percent) ignored; greater than 100 percent.

2004: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.

2005: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2005 reported data (141 percent) ignored; greater than 100 percent.

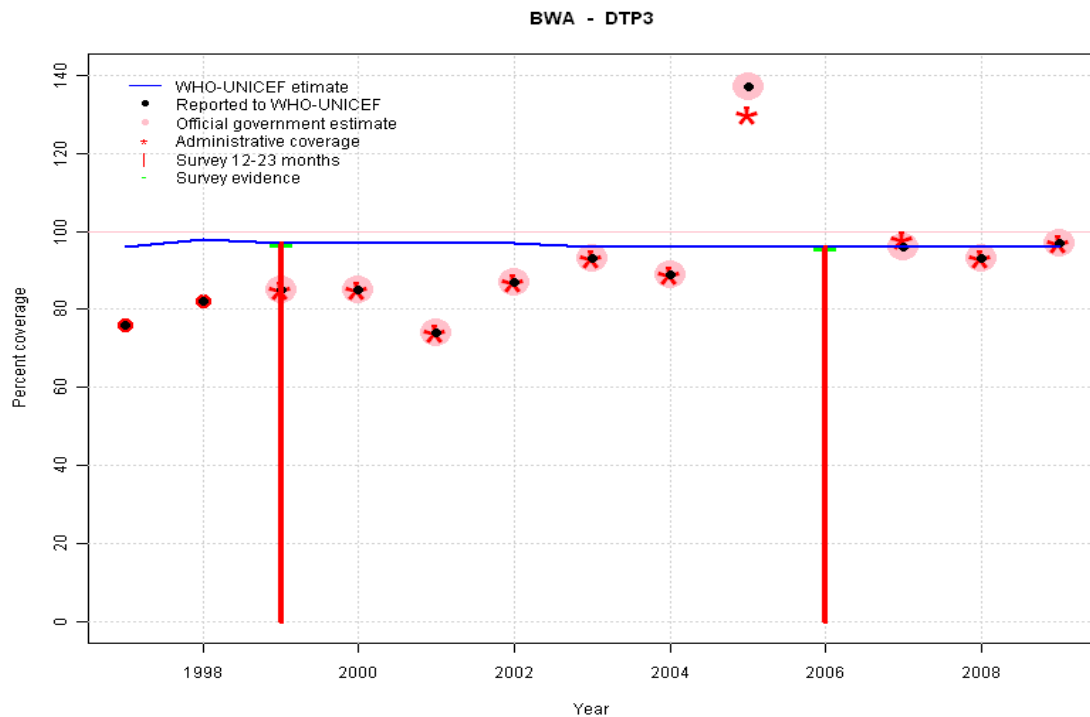
2006: Estimate based on survey results. 2006 reported data (131 percent) ignored; greater than 100 percent.

2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2004 reported value of 98 percent. 2007 reported data (104 percent) ignored; greater than 100 percent.

2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2004 reported value of 98 percent. 2008 reported data (109 percent) ignored; greater than 100 percent.

2009: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2004 reported value of 98 percent. 2009 reported data (107 percent) ignored; greater than 100 percent.

Botswana - DTP3

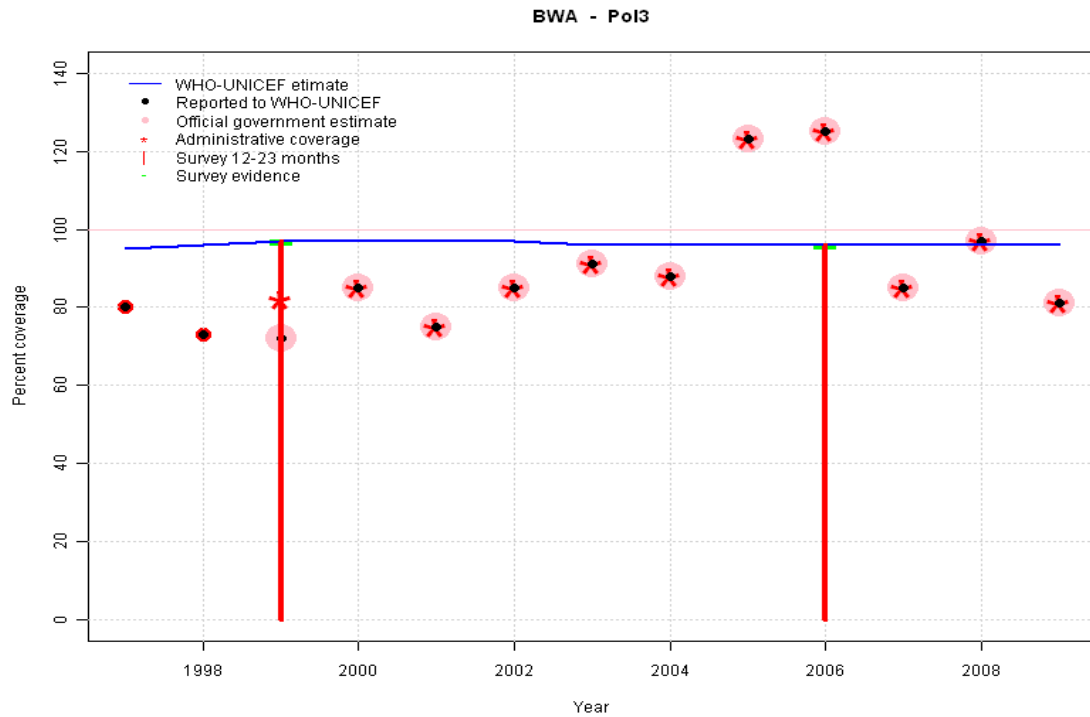


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	96	98	97	97	97	97	96	96	96	96	96	96	96
Reported	76	82	85	85	74	87	93	89	137	150	96	93	97
Official	NA	NA	85	85	74	87	93	89	137	150	96	93	97
Administrative	NA	NA	85	85	74	87	93	89	130	150	98	93	97
Survey	NA	NA	97	NA	NA	NA	NA	NA	NA	96	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Reported data (82 percent) calibrated to 1997 and 1999 levels.
- 1999: Estimate based on survey results. Reported data (85 percent) not consistent with survey results (97 percent). Survey results (97 percent) adjusted for recall bias to 97 percent based on first dose card or history coverage (98 percent) and documented drop-out between first (86 percent) and third (85 percent) doses.
- 2000: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2001: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2001 reported data (74 percent) inconsistent with data from other years.
- 2002: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2003: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2004: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2005: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2005 reported data (137 percent) ignored; greater than 100 percent.
- 2006: Estimate based on survey results. 2006 reported data (150 percent) ignored; greater than 100 percent. 2006 reported data (150 percent) inconsistent with data from other years.
- 2007: Estimate extrapolated from 2006 level (96 percent).
- 2008: Estimate extrapolated from 2006 level (96 percent).
- 2009: Estimate extrapolated from 2006 level (96 percent).

Botswana - Pol3

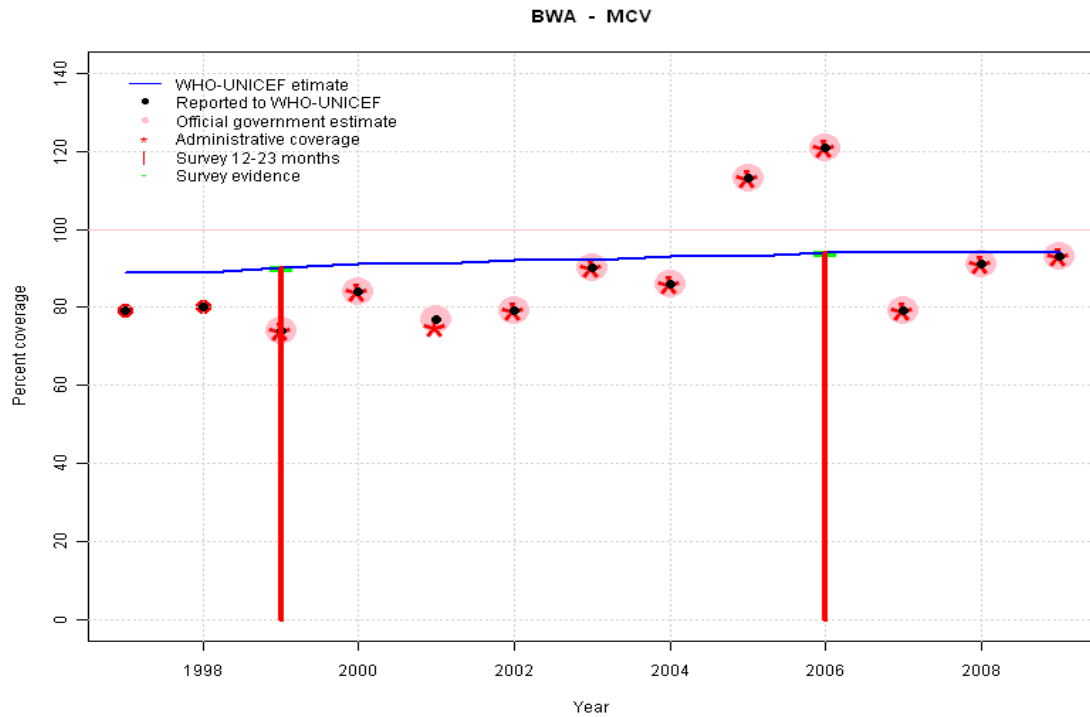


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	95	96	97	97	97	97	96	96	96	96	96	96	96
Reported	80	73	72	85	75	85	91	88	123	125	85	97	81
Official	NA	NA	72	85	75	85	91	88	123	125	85	97	81
Administrative	NA	NA	82	85	75	85	91	88	123	125	85	97	81
Survey	NA	NA	97	NA	NA	NA	NA	NA	NA	96	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 1999 estimates.
- 1999: Estimate based on survey results. Reported data (72 percent) not consistent with survey results (97 percent). Survey results (97 percent) adjusted for recall bias to 97 percent based on first dose card or history coverage (98 percent) and documented drop-out between first (86 percent) and third (85 percent) doses.
- 2000: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2001: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2002: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2003: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2004: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2005: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2005 reported data (123 percent) ignored; greater than 100 percent.
- 2006: Estimate based on survey results. 2006 reported data (125 percent) ignored; greater than 100 percent.
- 2007: Estimate extrapolated from 2006 level (96 percent). 2007 reported data (85 percent) inconsistent with data from other years.
- 2008: Estimate extrapolated from 2006 level (96 percent). 2008 reported data (97 percent) inconsistent with data from other years.
- 2009: Estimate extrapolated from 2006 level (96 percent). 2009 reported data (81 percent) inconsistent with data from other years.

Botswana - MCV

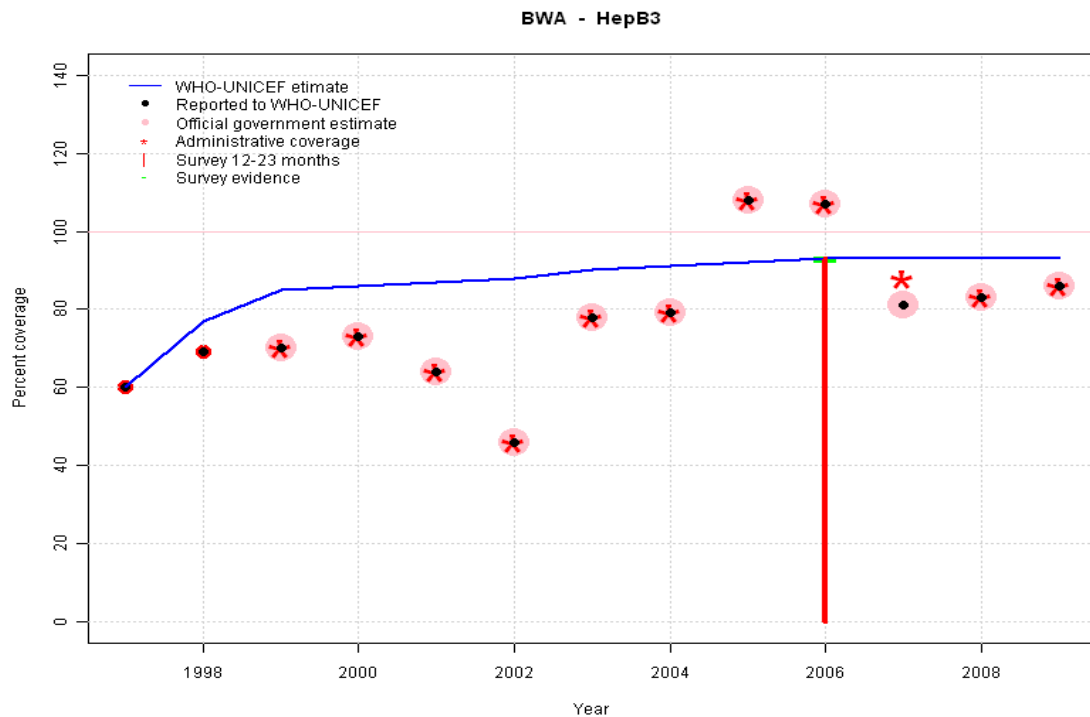


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	89	89	90	91	91	92	92	93	93	94	94	94	94
Reported	79	80	74	84	77	79	90	86	113	121	79	91	93
Official	NA	NA	74	84	77	79	90	86	113	121	79	91	93
Administrative	NA	NA	74	84	75	79	90	86	113	121	79	91	93
Survey	NA	NA	90	NA	NA	NA	NA	NA	NA	94	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Reported data (80 percent) calibrated to 1997 and 1999 levels.
- 1999: Estimate based on survey results. 1999 reported data (74 percent) ignored by working group. Rules are not perfect yet.
- 2000: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2001: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2002: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2003: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2004: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2005: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2005 reported data (113 percent) ignored; greater than 100 percent.
- 2006: Estimate based on survey results. 2006 reported data (121 percent) ignored; greater than 100 percent.
- 2007: Estimate extrapolated from 2006 level (94 percent). 2007 reported data (79 percent) inconsistent with data from other years.
- 2008: Estimate extrapolated from 2006 level (94 percent).
- 2009: Estimate extrapolated from 2006 level (94 percent).

Botswana - HepB3

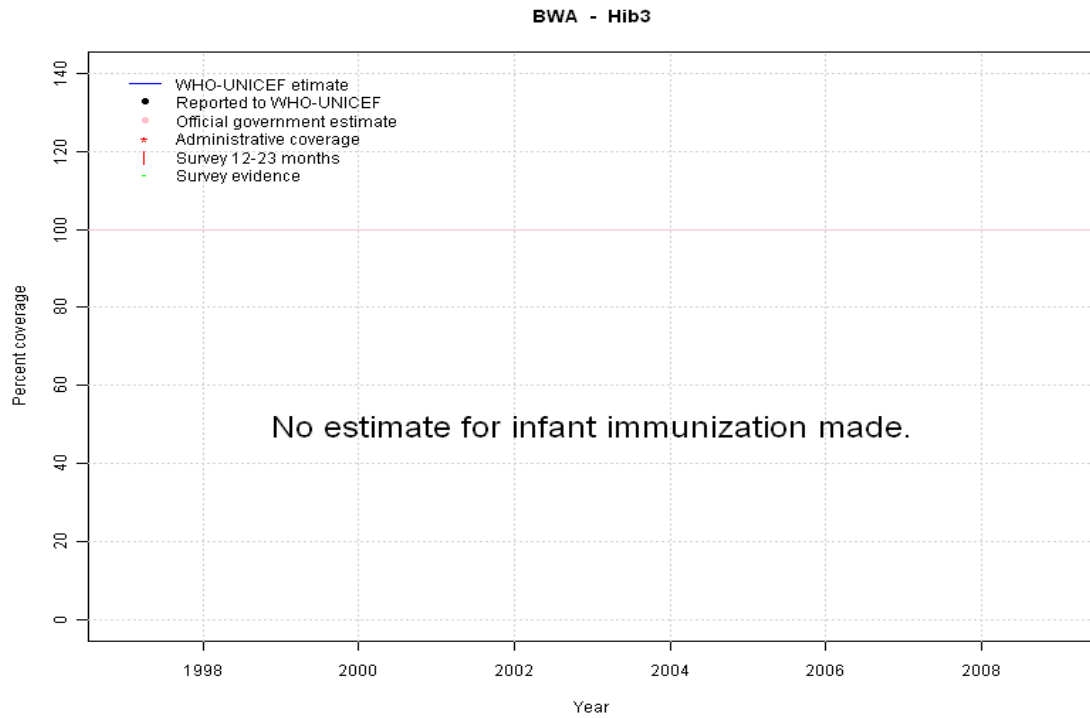


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	60	77	85	86	87	88	90	91	92	93	93	93	93
Reported	60	69	70	73	64	46	78	79	108	107	81	83	86
Official	NA	NA	70	73	64	46	78	79	108	107	81	83	86
Administrative	NA	NA	70	73	64	46	78	79	108	107	88	83	86
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	93	NA	NA	NA

Description:

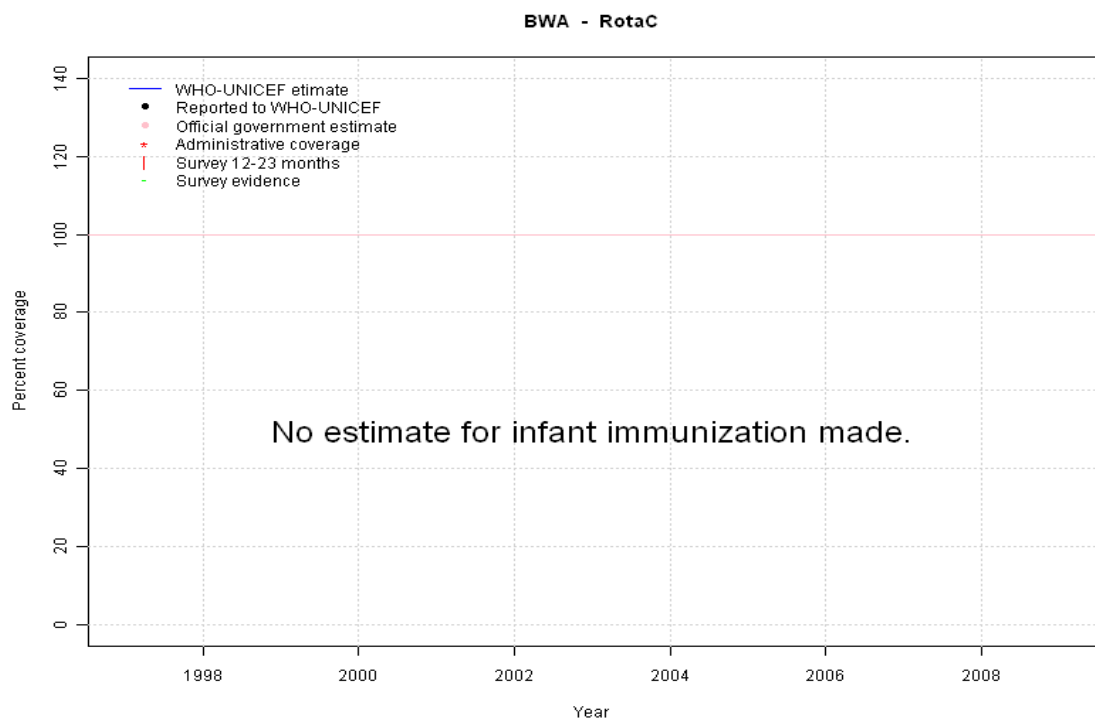
- 1997: Legacy estimate.
- 1998: Reported data (69 percent) calibrated to 1997 and 1999 levels.
- 1999: Estimate based on 1999 MICS coverage results adjusted for the difference between the measles and HepB3 coverage levels. The third dose of HepB vaccine is recommended at 9 months of age.
- 2000: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2001: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2002: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2002 reported data (46 percent) inconsistent with data from other years.
- 2003: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2004: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting.
- 2005: Estimate based on working group decision to interpolated between 1999 and 2006. Estimates based on survey results. Flucations in reported data suggest poor quality administrative recording and reporting. 2005 reported data (108 percent) ignored; greater than 100 percent.
- 2006: Estimate based on survey results. Reported data (80 percent) not consistent with survey results (93 percent). 2006 reported data (107 percent) ignored; greater than 100 percent.
- 2007: Estimate extrapolated from 2006 level (93 percent).
- 2008: Estimate extrapolated from 2006 level (93 percent).
- 2009: Estimate extrapolated from 2006 level (93 percent).

Botswana - Hib3



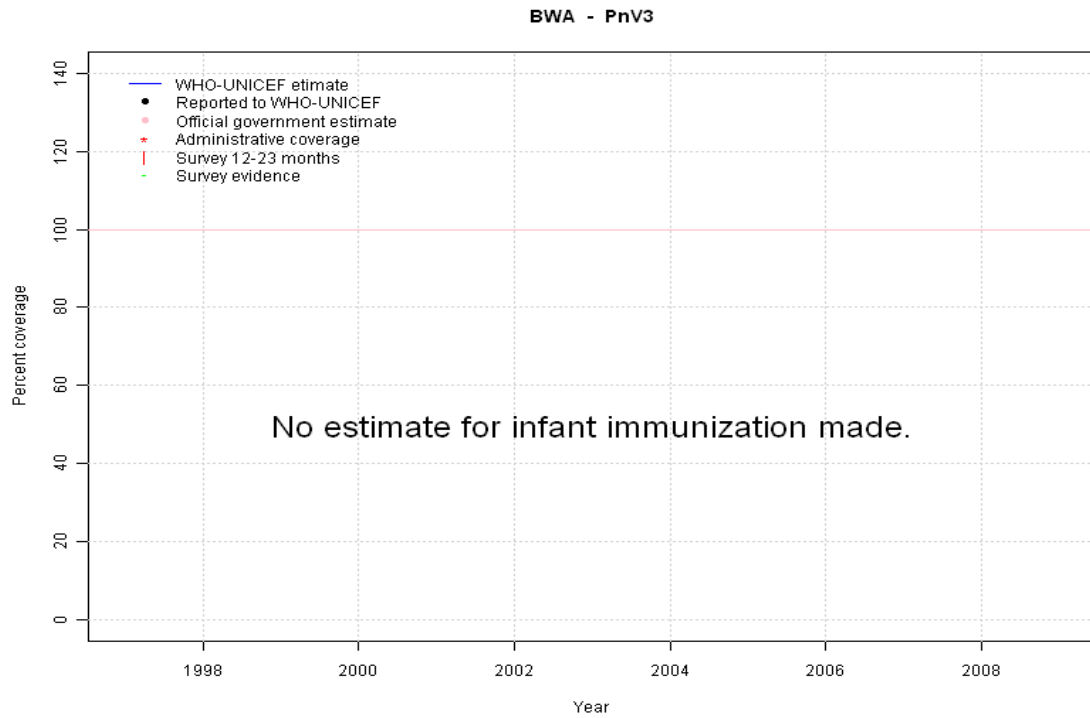
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA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

Botswana - 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

Botswana - 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

Botswana - survey details

2006 Botswana EPI Coverage Survey 2007

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	99	12-23 m	9083	98
DTP1	Card or History	98	12-23 m	9083	98
DTP3	Card or History	96	12-23 m	9083	98
HepB1	Card or History	97	12-23 m	9083	98
HepB3	Card or History	93	12-23 m	9083	98
MCV	Card or History	94	12-23 m	9083	98
Pol1	Card or History	97	12-23 m	9083	98
Pol3	Card or History	96	12-23 m	9083	98

1999 Botswana Multiple Indicator Cluster Survey 2000, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	99	12-23 m	618	84
BCG	C or H <12 months	99	12-23 m	618	84
BCG	History	12	12-23 m	618	84
BCG	Card	87	12-23 m	618	84

DTP1	Card	86	12-23 m	618	84
DTP1	Card or History	98	12-23 m	618	84
DTP1	History	12	12-23 m	618	84
DTP1	C or H <12 months	98	12-23 m	618	84
DTP3	History	12	12-23 m	618	84
DTP3	C or H <12 months	94	12-23 m	618	84
DTP3	Card	85	12-23 m	618	84
DTP3	Card or History	97	12-23 m	618	84
MCV	History	12	12-23 m	618	84
MCV	C or H <12 months	83	12-23 m	618	84
MCV	Card	78	12-23 m	618	84
MCV	Card or History	90	12-23 m	618	84
Pol1	Card	86	12-23 m	618	84
Pol1	Card or History	98	12-23 m	618	84
Pol1	History	12	12-23 m	618	84
Pol1	C or H <12 months	98	12-23 m	618	84
Pol3	C or H <12 months	94	12-23 m	618	84
Pol3	Card	85	12-23 m	618	84
Pol3	Card or History	97	12-23 m	618	84
Pol3	History	12	12-23 m	618	84

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

Botswana

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	69
1998	72
1999	80
2000	80
2001	81
2002	82
2003	82
2004	83
2005	83
2006	84
2007	84
2008	85
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.