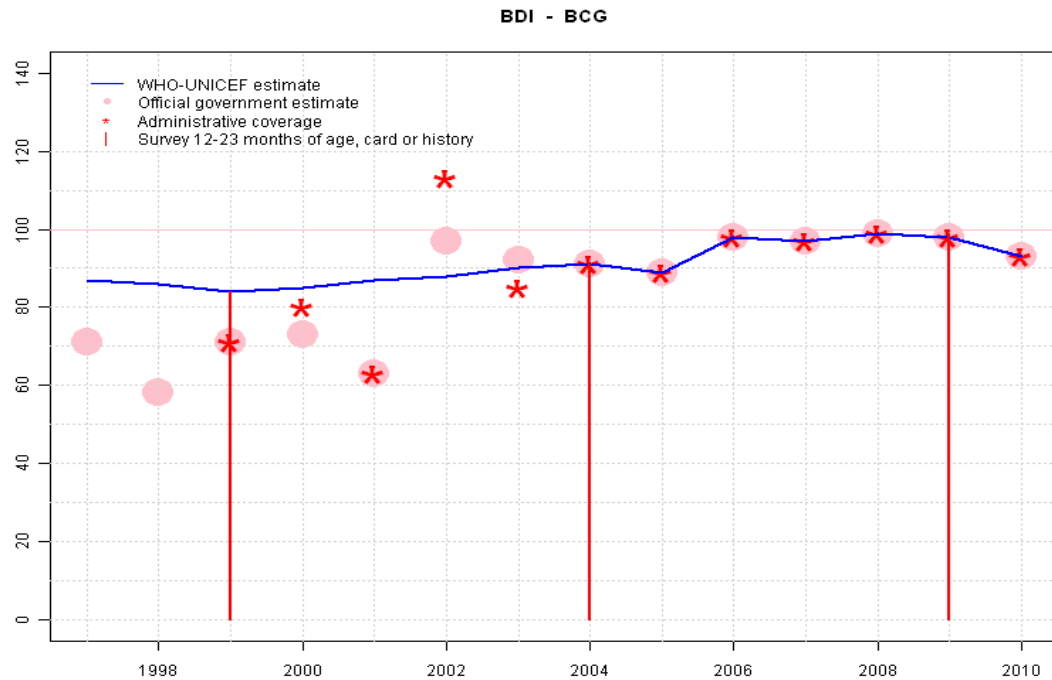


Burundi - BCG



Description:

1997: Legacy estimate.

1998: Estimate based on interpolation between 1997 and 1999. Reported data not accepted due to a decline from 71 percent to 58 percent with a subsequent increase to 71 percent.

1999: Estimate based on survey results. 84 percent survey results does not support reported data of 71 percent.

2000: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2001: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2002: Estimate based on interpolation between 1999 and 2004. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system. Fluctuation in officially reported data suggests problems in reporting system.

2003: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2004: Estimate based on reported data. 91 percent survey results supports reported data of 91 percent. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

2007: Estimate based on reported data.

2008: Estimate based on reported data.

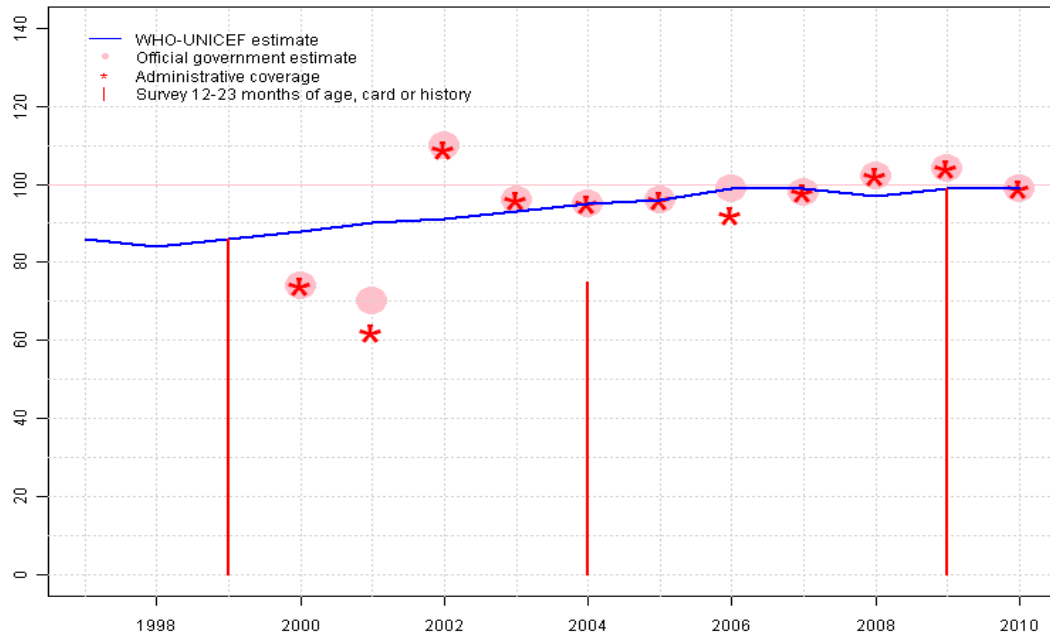
2009: Estimate based on reported data. 99 percent survey results supports reported data of 98 percent.

2010: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	87	86	84	85	87	88	90	91	89	98	97	99	98	93
Official	71	58	71	73	63	97	92	91	89	98	97	99	98	93
Administrative	NA	NA	71	80	63	113	85	91	89	98	97	99	98	93
Survey	NA	NA	84	NA	NA	NA	NA	91	NA	NA	NA	NA	99	NA

Burundi - DTP1

BDI - DTP1



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	86	84	86	88	90	91	93	95	96	99	99	97	99	99
Official	NA	NA	NA	74	70	110	96	95	96	99	98	102	104	99
Administrative	NA	NA	NA	74	62	109	96	95	96	92	98	102	104	99
Survey	NA	NA	86	NA	NA	NA	NA	75	NA	NA	NA	NA	99	NA

Description:

1997: Legacy estimate.

1998: No DTP1 data. Estimate based on DTP3 coverage of 65. Current estimate of 84 percent changed from previous revision value of 86 percent.

1999: No accepted reported data. Reported data of 74 percent estimated by extrapolating from 2000 does not support trend in reported data. 86 percent survey results

2000: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2001: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2002: Estimate based on interpolation between 1999 and 2004. Reported data of 110 percent greater than 100 percent. Reported data not accepted due to an increase from 70 percent to 110 percent with a subsequent decrease to 96 percent. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system. Fluctuation in officially reported data suggests problems in reporting system.

2003: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2004: DTP survey results are inconsistent with results for other vaccines. DTP coverage may not include doses received through DTP3-HepB-Hib pentavalent vaccine introduced in 2004. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

2007: DTP1 coverage estimated based on DTP3 coverage of 99. Current estimate of 99 percent changed from previous revision value of 98 percent.

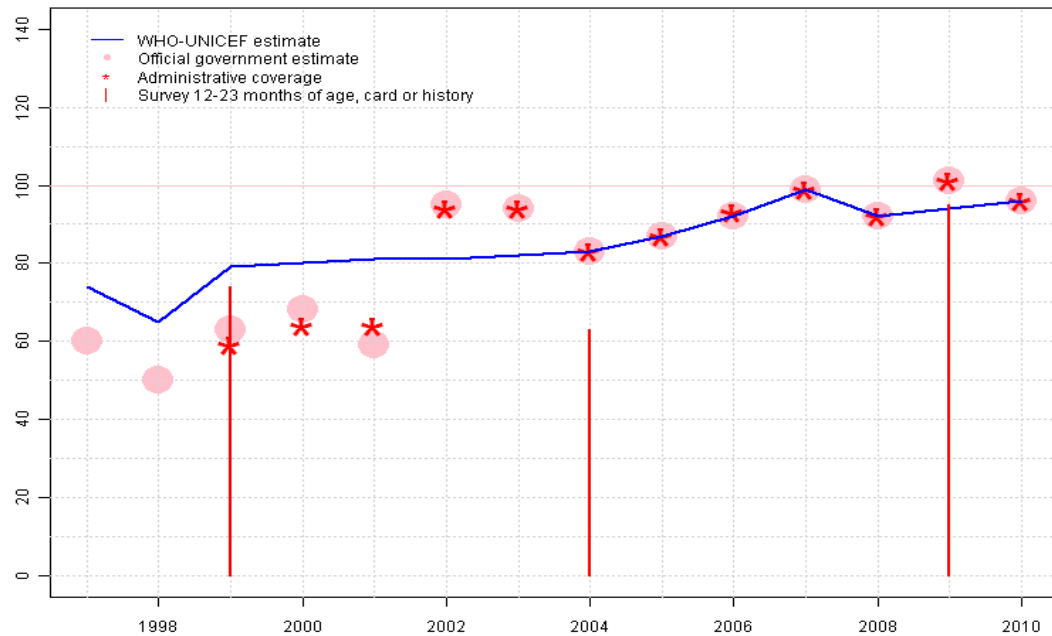
2008: No DTP1 data. Estimate based on DTP3 coverage of 92. Reported data of 102 percent greater than 100 percent. Current estimate of 97 percent changed from previous revision value of 98 percent.

2009: No accepted reported data. Reported data of 99 percent estimated by interpolation between 2007 and 2010 supports trend in reported data. 99 percent survey results Reported data of 104 percent greater than 100 percent. Current estimate of 99 percent changed from previous revision value of 98 percent.

2010: Estimate based on reported data.

Burundi - DTP3

BDI - DTP3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	74	65	79	80	81	81	82	83	87	92	99	92	94	96
Official	60	50	63	68	59	95	94	83	87	92	99	92	101	96
Administrative	NA	NA	59	64	64	94	94	83	87	93	99	92	101	96
Survey	NA	NA	74	NA	NA	NA	NA	63	NA	NA	NA	NA	95	NA

Description:

1997: Legacy estimate.

1998: Reported data calibrated to 1997 and 1999 levels.

1999: Estimate based on survey results. 79 percent survey results does not support reported data of 63 percent. Survey results of 74 percent modified for recall bias to 79 percent based on 1st dose card or history coverage of 86 percent, 1st dose card only coverage of 62 percent and 3d dose card only coverage of 57 percent.

2000: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2001: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2002: Estimate based on interpolation between 1999 and 2004. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system. Fluctuation in officially reported data suggests problems in reporting system.

2003: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2004: DTP survey results are inconsistent with results for other vaccines. DTP coverage may not include doses received through DTP3-HepB-Hib pentavalent vaccine introduced in 2004. Survey results of 63 percent modified for recall bias to 70 percent based on 1st dose card or history coverage of 75 percent, 1st dose card only coverage of 47 percent and 3d dose card only coverage of 44 percent. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

2007: Estimate based on reported data.

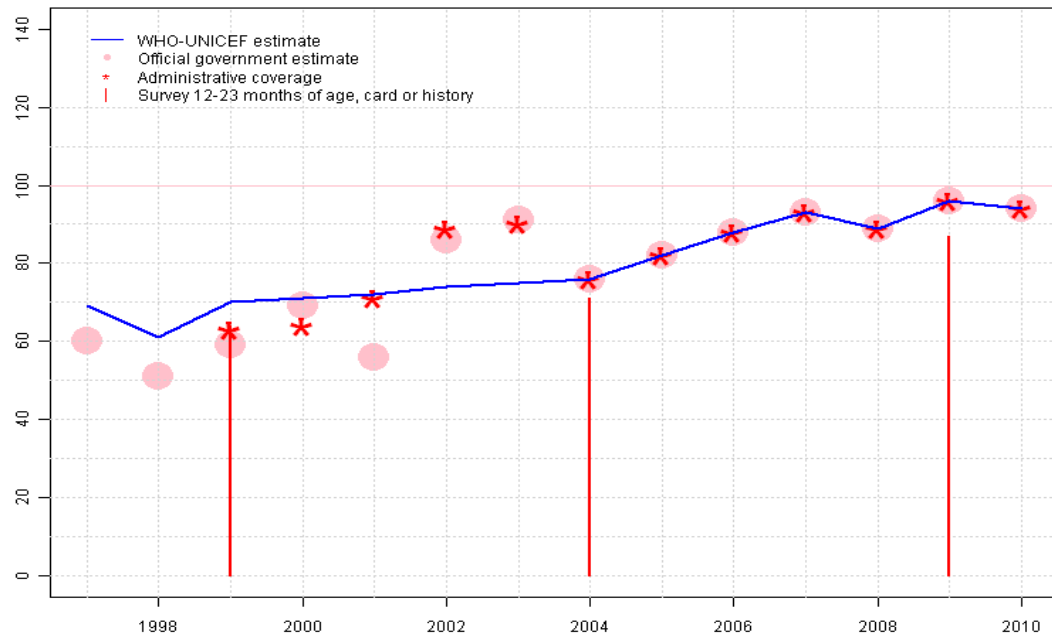
2008: Estimate based on reported data.

2009: No accepted reported data. Reported data of 94 percent estimated by interpolation between 2008 and 2010 supports trend in reported data. 95 percent survey results Reported data of 101 percent greater than 100 percent. Current estimate of 94 percent changed from previous revision value of 92 percent.

2010: Estimate based on reported data.

Burundi - Pol3

BDI - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	69	61	70	71	72	74	75	76	82	88	93	89	96	94
Official	60	51	59	69	56	86	91	76	82	88	93	89	96	94
Administrative	NA	NA	63	64	71	89	90	76	82	88	93	89	96	94
Survey	NA	NA	64	NA	NA	NA	NA	71	NA	NA	NA	NA	87	NA

Description:

1997: Legacy estimate.

1998: Reported data calibrated to 1997 and 1999 levels. Current estimate of 61 percent changed from previous revision value of 70 percent.

1999: Estimate based on survey results. 70 percent survey results does not support reported data of 59 percent. Survey results of 64 percent modified for recall bias to 70 percent based on 1st dose card or history coverage of 87 percent, 1st dose card only coverage of 60 percent and 3d dose card only coverage of 48 percent.

2000: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2001: Estimate based on interpolation between 1999 and 2004. Reported data not accepted due to a decline from 69 percent to 56 percent with a subsequent increase to 86 percent. Fluctuation in officially reported data suggests problems in reporting system.

2002: Estimate based on interpolation between 1999 and 2004. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system. Fluctuation in officially reported data suggests problems in reporting system.

2003: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2004: Estimate based on reported data. 77 percent survey results supports reported data of 76 percent. Survey results of 71 percent modified for recall bias to 77 percent based on 1st dose card or history coverage of 90 percent, 1st dose card only coverage of 63 percent and 3d dose card only coverage of 54 percent. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

2007: Estimate based on reported data.

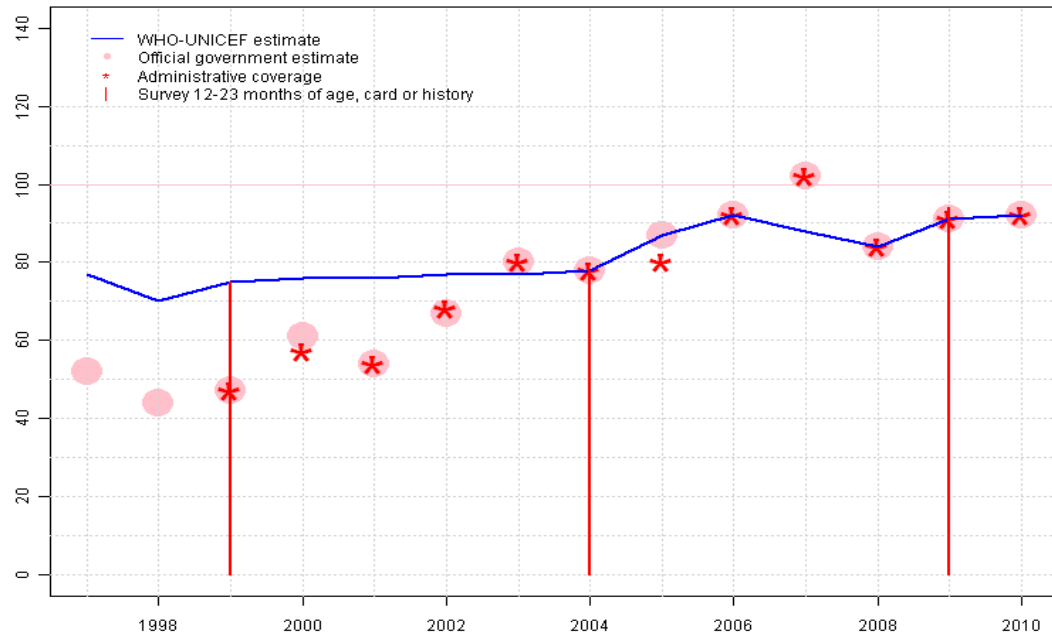
2008: Estimate based on reported data.

2009: Estimate based on reported data. 87 percent survey results supports reported data of 96 percent.

2010: Estimate based on reported data.

Burundi - MCV

BDI - MCV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	77	70	75	76	76	77	77	78	87	92	88	84	91	92
Official	52	44	47	61	54	67	80	78	87	92	102	84	91	92
Administrative	NA	NA	47	57	54	68	80	78	80	92	102	84	91	92
Survey	NA	NA	75	NA	NA	NA	NA	78	NA	NA	NA	NA	94	NA

Description:

1997: Legacy estimate.

1998: Reported data calibrated to 1997 and 1999 levels.

1999: Estimate based on survey results. 75 percent survey results does not support reported data of 47 percent.

2000: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2001: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2002: Estimate based on interpolation between 1999 and 2004. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system. Fluctuation in officially reported data suggests problems in reporting system.

2003: Estimate based on interpolation between 1999 and 2004. Fluctuation in officially reported data suggests problems in reporting system.

2004: Estimate based on reported data. 78 percent survey results supports reported data of 78 percent. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

2007: Estimate based on interpolation between 2006 and 2008. Reported data of 102 percent greater than 100 percent.

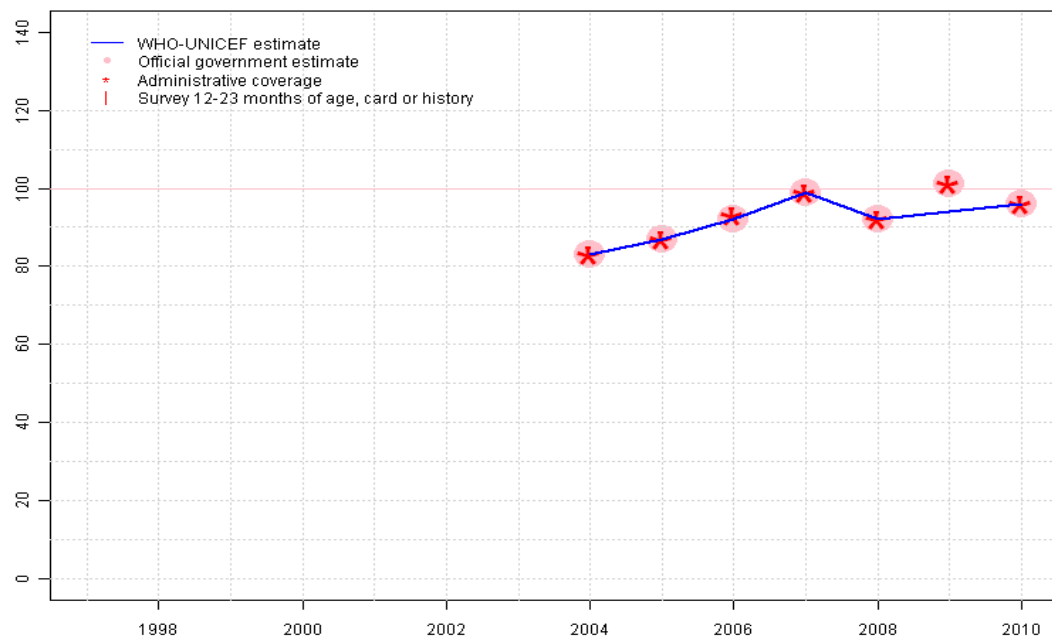
2008: Estimate based on reported data.

2009: Estimate based on reported data. 94 percent survey results supports reported data of 91 percent.

2010: Estimate based on reported data.

Burundi - HepB3

BDI - HepB3



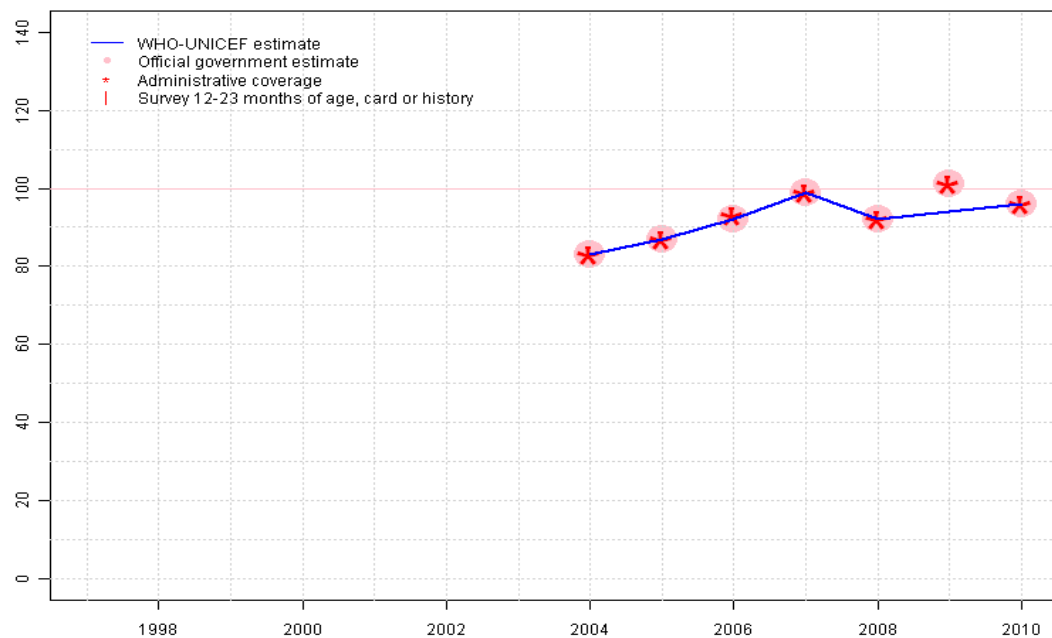
Description:

- 2004: Estimate based on reported data. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system. HepB introduced in 2004 Vaccine presentation is DTP-HepB-Hib.
- 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 interpolation between 2008 and 2010. Reported data of 101 percent greater than 100 percent. Current estimate of 94 percent changed from previous revision value of 92 percent.
- 2010: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	NA	NA	83	87	92	99	92	94	96
Official	NA	NA	NA	NA	NA	NA	NA	83	87	92	99	92	101	96
Administrative	NA	NA	NA	NA	NA	NA	NA	83	87	93	99	92	101	96
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Burundi - Hib3

BDI - Hib3

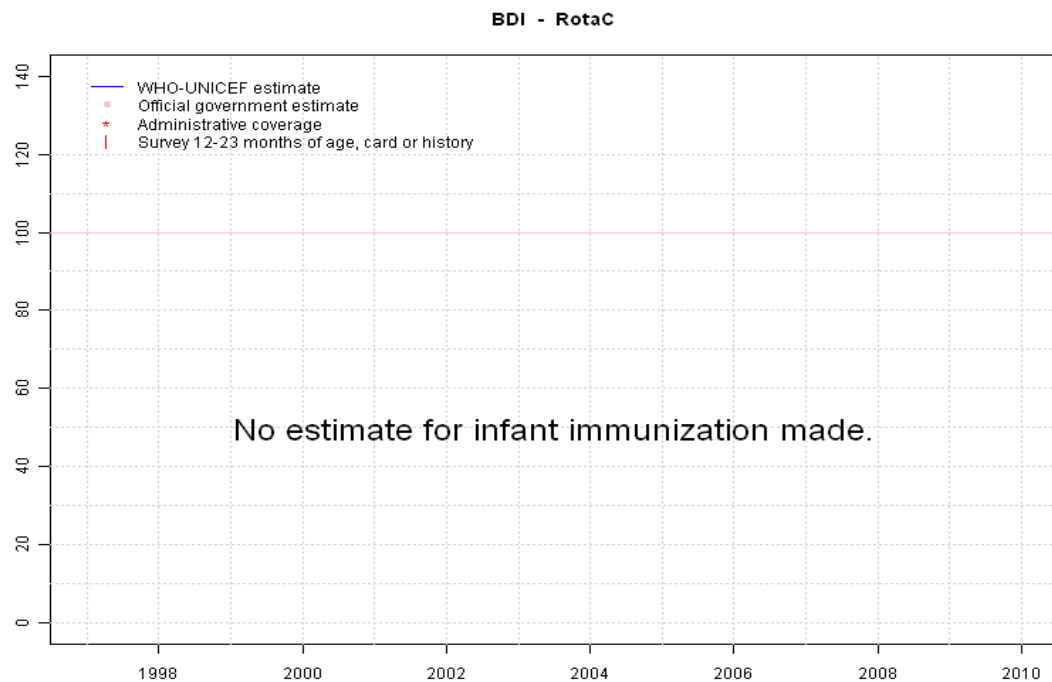


Description:

- 2004: Estimate based on reported data. Data quality audit conducted for the Vaccine Fund suggested inadequacies in the reporting system. Hib introduced in 2004 Vaccine presentation is DTP-HepB-Hib.
- 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 interpolation between 2008 and 2010. Reported data of 101 percent greater than 100 percent. Current estimate of 94 percent changed from previous revision value of 92 percent.
- 2010: Estimate based on reported data.

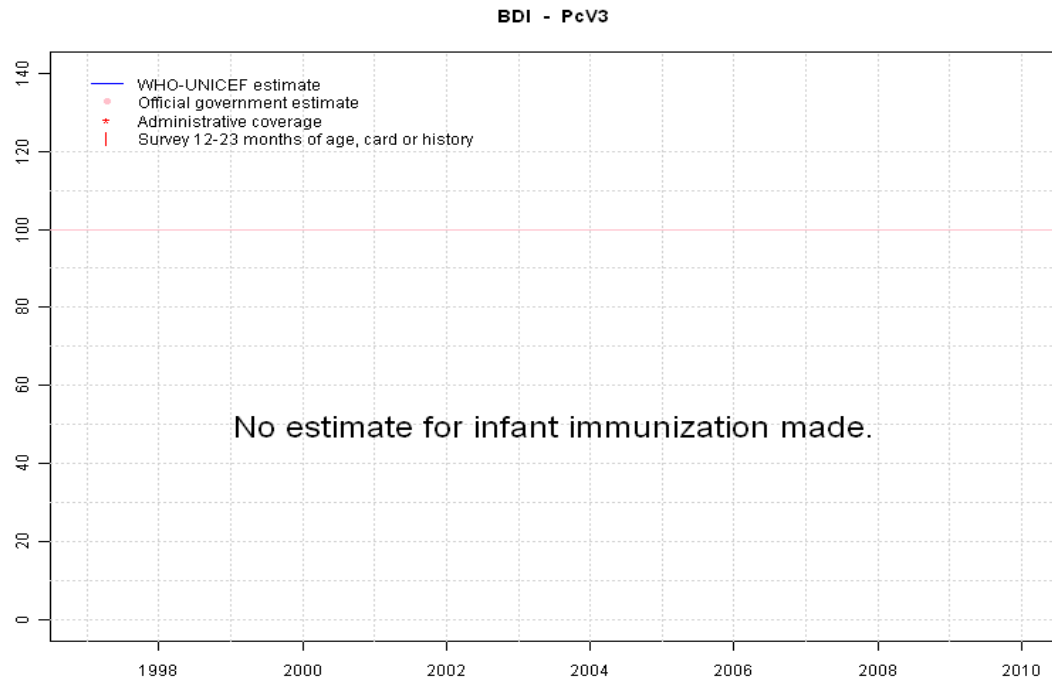
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	NA	NA	83	87	92	99	92	94	96
Official	NA	NA	NA	NA	NA	NA	NA	83	87	92	99	92	101	96
Administrative	NA	NA	NA	NA	NA	NA	NA	83	87	93	99	92	101	96
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Burundi - RotaC



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	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	NA
Administrative	NA	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	NA

Burundi - PcV3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	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	NA
Administrative	NA	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	NA

Burundi - survey details

2009 Enquête Démographique et de Santé Burundi 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	99	12-23 m	1552	62
DTP1	Card or History	99	12-23 m	1552	62
DTP3	Card or History	95	12-23 m	1552	62
MCV	Card or History	94	12-23 m	1552	62
Pol1	Card or History	99	12-23 m	1552	62
Pol3	Card or History	87	12-23 m	1552	62

2004 Enquête Nationale d'Évaluation des Conditions de vie de l'Enfant et de la Femme au Burundi - 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	62	12-23 m	1453	64
BCG	C or H <12 months	90	12-23 m	1453	64
BCG	Card or History	91	12-23 m	1453	64
BCG	History	28	12-23 m	1453	64
DTP1	History	28	12-23 m	1453	64
DTP1	Card or History	75	12-23 m	1453	64
DTP1	Card	47	12-23 m	1453	64
DTP1	C or H <12 months	74	12-23 m	1453	64
DTP3	History	19	12-23 m	1453	64
DTP3	Card or History	63	12-23 m	1453	64
DTP3	Card	44	12-23 m	1453	64
DTP3	C or H <12 months	60	12-23 m	1453	64
MCV	History	27	12-23 m	1453	64
MCV	Card	51	12-23 m	1453	64
MCV	C or H <12 months	69	12-23 m	1453	64
MCV	Card or History	78	12-23 m	1453	64
Pol1	History	28	12-23 m	1453	64

Pol1	Card or History	90	12-23 m	1453	64
Pol1	C or H <12 months	89	12-23 m	1453	64
Pol1	Card	63	12-23 m	1453	64
Pol3	History	17	12-23 m	1453	64
Pol3	Card or History	71	12-23 m	1453	64
Pol3	Card	54	12-23 m	1453	64
Pol3	C or H <12 months	68	12-23 m	1453	64

1999 Enquête Nationale d'Évaluation des Conditions de vie de l'Enfant et de la Femme au Burundi, Rapport Préliminaire, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	61	12-23 m	598	62
BCG	Card or History	84	12-23 m	598	62
BCG	History	23	12-23 m	598	62
DTP1	Card	62	12-23 m	598	62
DTP1	Card or History	86	12-23 m	598	62
DTP1	History	24	12-23 m	598	62
DTP3	History	17	12-23 m	598	62
DTP3	Card	57	12-23 m	598	62
DTP3	Card or History	74	12-23 m	598	62
MCV	Card or History	75	12-23 m	598	62
MCV	History	23	12-23 m	598	62
MCV	Card	52	12-23 m	598	62
Pol1	History	27	12-23 m	598	62
Pol1	Card or History	87	12-23 m	598	62
Pol1	Card	60	12-23 m	598	62
Pol3	History	16	12-23 m	598	62
Pol3	Card	48	12-23 m	598	62
Pol3	Card or History	64	12-23 m	598	62

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

Burundi

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	60
1998	44
1999	35
2000	51
2001	55
2002	63
2003	65
2004	66
2005	65
2006	66
2007	76
2008	78
2009	94
2010	94

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.