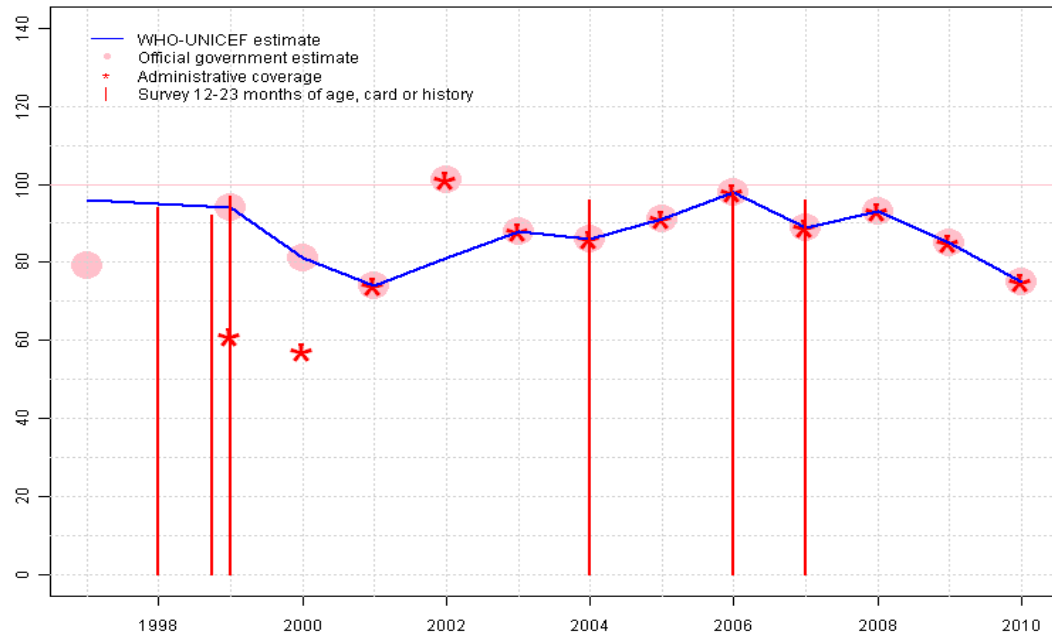


Rwanda - BCG

RWA - BCG



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	96	95	94	81	74	81	88	86	91	98	89	93	85	75
Official	79	NA	94	81	74	101	88	86	91	98	89	93	85	75
Administrative	NA	NA	61	57	74	101	88	86	91	98	89	93	85	75
Survey	NA	94	*	NA	NA	NA	NA	96	NA	98	96	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on interpolation between 1997 and 1999. Survey results not accepted. Sample size 0 less than 300.

1999: Estimate based on reported data. *Summary survey results of 95 percent based on 2 surveys (see survey summary page) supports reported data of 94 percent.

2000: Estimate based on reported data.

2001: Estimate based on reported data.

2002: Estimate based on interpolation between 2001 and 2003. Reported data of 101 percent greater than 100 percent. Reported data not accepted due to an increase from 74 percent to 101 percent with a subsequent decrease to 88 percent.

2003: Estimate based on reported data.

2004: Estimate based on reported data. 96 percent survey results supports reported data of 86 percent.

2005: Estimate based on reported data.

2006: Estimate based on reported data. 98 percent survey results supports reported data of 98 percent.

2007: Estimate based on reported data. 96 percent survey results supports reported data of 89 percent.

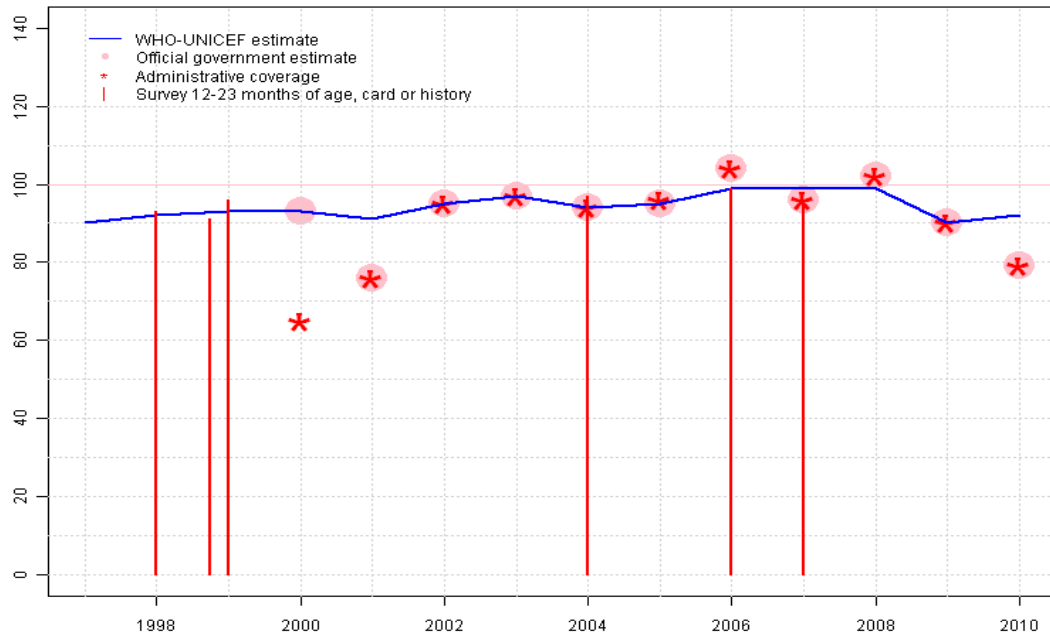
2008: Estimate based on reported data.

2009: Estimate based on reported data. Current estimate of 85 percent changed from previous revision value of 93 percent.

2010: Estimate based on reported data. Estimate based on reported coverage.

Rwanda - DTP1

RWA - DTP1



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	90	92	93	93	91	95	97	94	95	99	99	99	90	92
Official	NA	NA	NA	93	76	95	97	94	95	104	96	102	90	79
Administrative	NA	NA	NA	65	76	95	97	94	96	104	96	102	90	79
Survey	NA	93	*	NA	NA	NA	NA	97	NA	99	95	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on interpolation between 1997 and 1999. Survey results not accepted. Sample size 0 less than 300.

1999: No accepted reported data. Reported data of 93 percent estimated by extrapolating from 2000 supports trend in reported data. *Summary survey results of 94 percent based on 2 surveys (see survey summary page)

2000: Estimate based on reported data.

2001: No DTP1 data. Estimate based on DTP3 coverage of 77. Reported data not accepted due to a decline from 93 percent to 76 percent with a subsequent increase to 95 percent. Current estimate of 91 percent changed from previous revision value of 94 percent.

2002: Estimate based on reported data.

2003: Estimate based on reported data.

2004: Estimate based on reported data. 97 percent survey results supports reported data of 94 percent.

2005: Estimate based on reported data.

2006: DTP1 coverage estimated based on DTP3 coverage of 100. Reported data of 104 percent greater than 100 percent. Current estimate of 99 percent changed from previous revision value of 98 percent.

2007: DTP1 coverage estimated based on DTP3 coverage of 97. Current estimate of 99 percent changed from previous revision value of 98 percent.

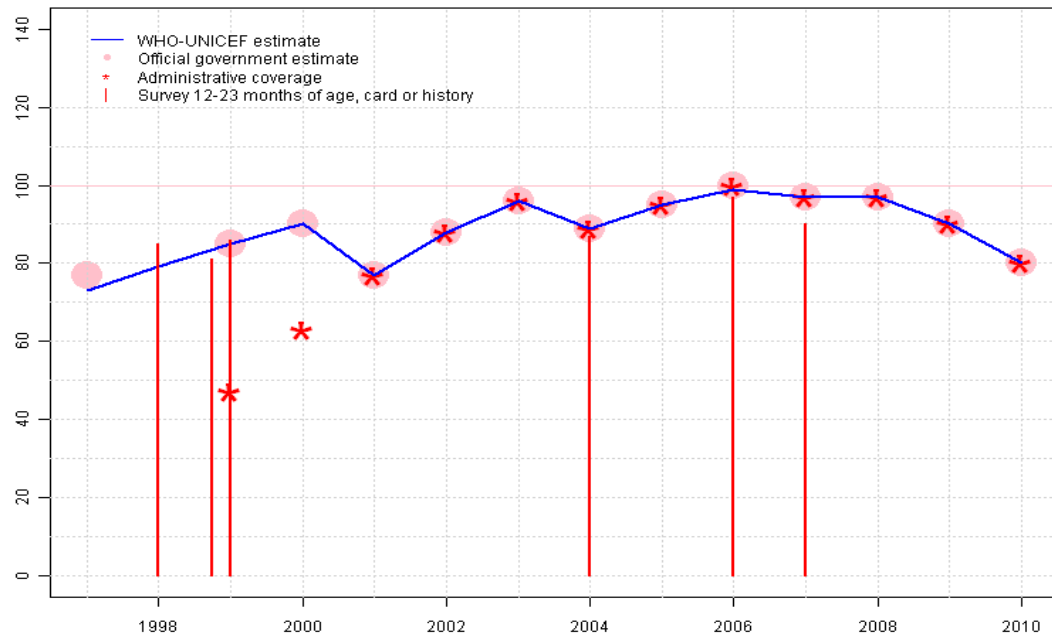
2008: No DTP1 data. Estimate based on DTP3 coverage of 97. Reported data of 102 percent greater than 100 percent. Current estimate of 99 percent changed from previous revision value of 98 percent.

2009: Estimate based on reported data. Current estimate of 90 percent changed from previous revision value of 98 percent.

2010: DTP1 coverage estimated based on DTP3 coverage of 80. Estimate based on reported coverage.

Rwanda - DTP3

RWA - DTP3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	73	79	85	90	77	88	96	89	95	99	97	97	90	80
Official	77	NA	85	90	77	88	96	89	95	100	97	97	90	80
Administrative	NA	NA	47	63	77	88	96	89	95	100	97	97	90	80
Survey	NA	85	*	NA	NA	NA	NA	87	NA	97	90	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on interpolation between 1997 and 1999. Survey results not accepted. Sample size 0 less than 300.

1999: Estimate based on reported data. *Summary survey results of 90 percent based on 2 surveys (see survey summary page) supports reported data of 85 percent. Survey results of 81 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 69 percent. Survey results of 86 percent modified for recall bias to 92 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 66 percent and 3d dose card only coverage of 63 percent.

2000: Estimate based on reported data.

2001: Estimate based on reported data. Officially reported data follow the same pattern as with other multi-dose antigens.

2002: Estimate based on reported data.

2003: Estimate based on reported data.

2004: Estimate based on reported data. 93 percent survey results supports reported data of 89 percent. Survey results of 87 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 76 percent and 3d dose card only coverage of 73 percent.

2005: Estimate based on reported data.

2006: Estimate based on reported data. 97 percent survey results supports reported data of 100 percent. Survey results of 97 percent modified for recall bias to 97 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 99 percent and 3d dose card only coverage of 97 percent.

2007: Estimate based on reported data. 94 percent survey results supports reported data of 97 percent. Survey results of 90 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 67 percent and 3d dose card only coverage of 66 percent.

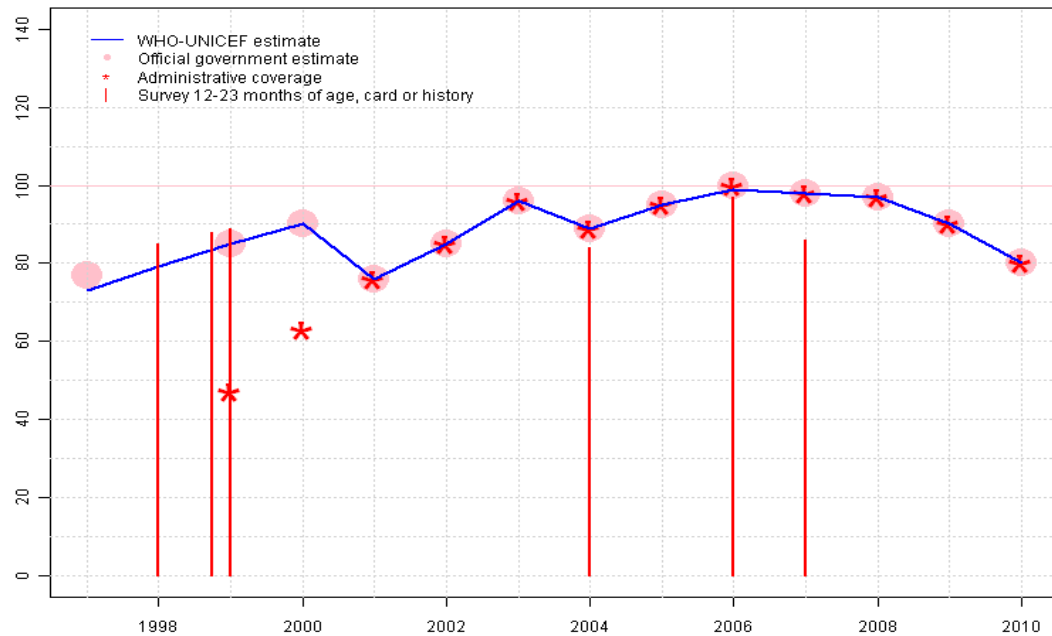
2008: Estimate based on reported data.

2009: Estimate based on reported data. Current estimate of 90 percent changed from previous revision value of 97 percent.

2010: Estimate based on reported data. Estimate based on reported coverage.

Rwanda - Pol3

RWA - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	73	79	85	90	76	85	96	89	95	99	98	97	90	80
Official	77	NA	85	90	76	85	96	89	95	100	98	97	90	80
Administrative	NA	NA	47	63	76	85	96	89	95	100	98	97	90	80
Survey	NA	85	*	NA	NA	NA	NA	84	NA	97	86	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on interpolation between 1997 and 1999. Survey results not accepted. Sample size 0 less than 300.

1999: Estimate based on reported data. *Summary survey results of 91 percent based on 2 surveys (see survey summary page) supports reported data of 85 percent. Survey results of 89 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 92 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 70 percent. Survey results of 88 percent modified for recall bias to 93 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 66 percent and 3d dose card only coverage of 64 percent.

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. 92 percent survey results supports reported data of 89 percent. Survey results of 84 percent modified for recall bias to 92 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 76 percent and 3d dose card only coverage of 73 percent.

2005: Estimate based on reported data.

2006: Estimate based on reported data. 97 percent survey results supports reported data of 100 percent. Survey results of 97 percent modified for recall bias to 97 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 98 percent and 3d dose card only coverage of 97 percent.

2007: Estimate based on reported data. 95 percent survey results supports reported data of 98 percent. Survey results of 86 percent modified for recall bias to 95 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 67 percent and 3d dose card only coverage of 66 percent.

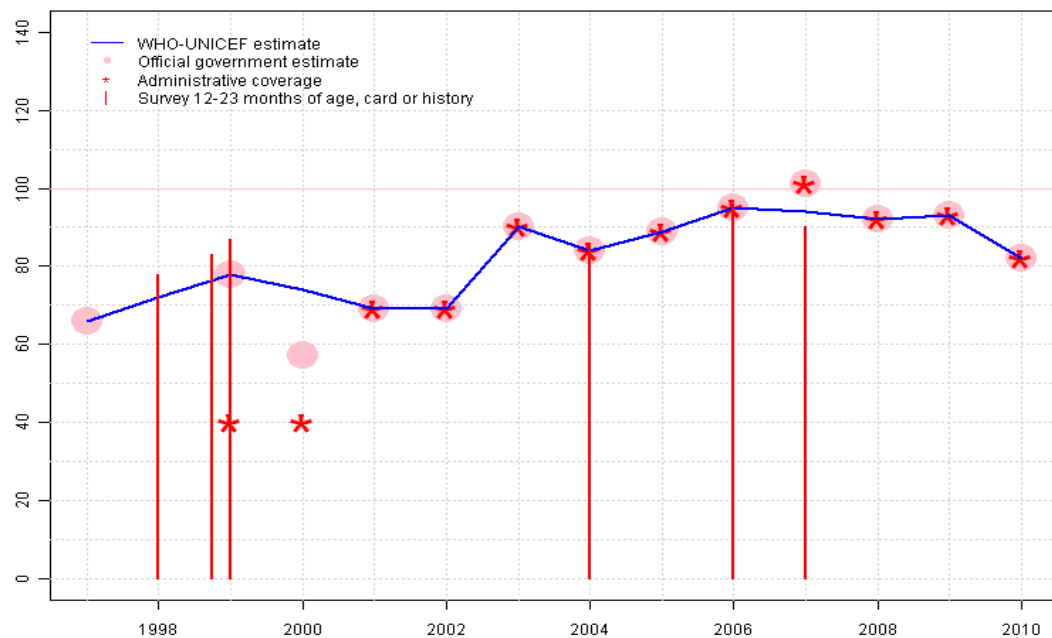
2008: Estimate based on reported data.

2009: Estimate based on reported data. Current estimate of 90 percent changed from previous revision value of 97 percent.

2010: Estimate based on reported data. Estimate based on reported coverage.

Rwanda - MCV

RWA - MCV



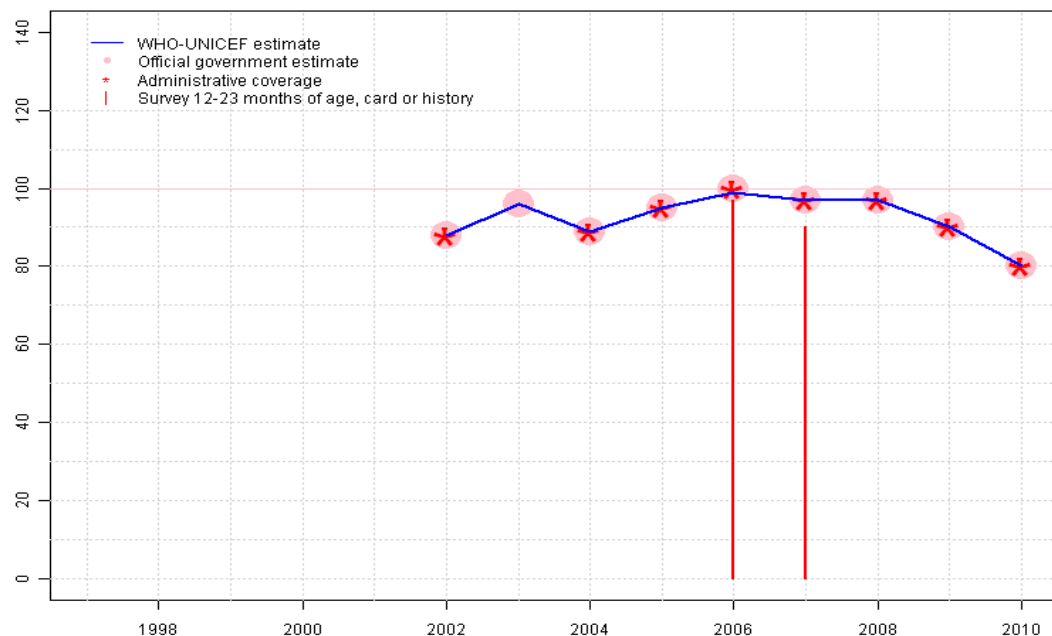
Description:

- 1997: Legacy estimate.
- 1998: Estimate based on interpolation between 1997 and 1999. Survey results not accepted. Sample size 0 less than 300.
- 1999: Estimate based on reported data. *Summary survey results of 85 percent based on 2 surveys (see survey summary page) supports reported data of 78 percent.
- 2000: Estimate based on interpolation between 1999 and 2001. Reported data not accepted due to a decline from 78 percent to 57 percent with a subsequent increase to 69 percent.
- 2001: Estimate based on reported data.
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data.
- 2004: Estimate based on reported data. 86 percent survey results supports reported data of 84 percent.
- 2005: Estimate based on reported data.
- 2006: Estimate based on reported data. 96 percent survey results supports reported data of 95 percent.
- 2007: No accepted reported data. Reported data of 94 percent estimated by interpolation between 2006 and 2008 supports trend in reported data. 90 percent survey results Reported data of 101 percent greater than 100 percent.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data. Current estimate of 93 percent changed from previous revision value of 92 percent.
- 2010: Estimate based on reported data. Estimate based on reported coverage.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	66	72	78	74	69	69	90	84	89	95	94	92	93	82
Official	66	NA	78	57	69	69	90	84	89	95	101	92	93	82
Administrative	NA	NA	40	40	69	69	90	84	89	95	101	92	93	82
Survey	NA	78	*	NA	NA	NA	NA	86	NA	96	90	NA	NA	NA

Rwanda - HepB3

RWA - HepB3



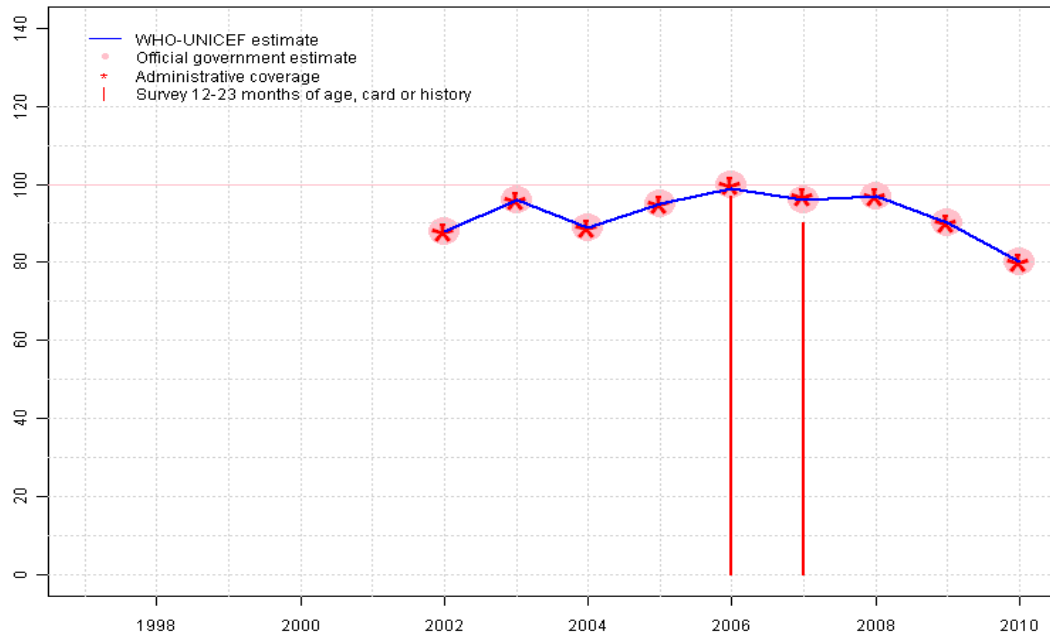
Description:

- 2002: Estimate based on reported data. HepB introduced in 2002 Vaccine presentation is DTP-HepB-Hib.
- 2003: Estimate based on reported data.
- 2004: Estimate based on reported data.
- 2005: Estimate based on reported data.
- 2006: Estimate based on reported data. 97 percent survey results supports reported data of 100 percent. Survey results of 97 percent modified for recall bias to 97 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 99 percent and 3d dose card only coverage of 97 percent.
- 2007: Estimate based on reported data. 94 percent survey results supports reported data of 97 percent. Survey results of 90 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 67 percent and 3d dose card only coverage of 66 percent.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data. Current estimate of 90 percent changed from previous revision value of 97 percent.
- 2010: Estimate based on reported data. Estimate based on reported coverage.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	88	96	89	95	99	97	97	90	80
Official	NA	NA	NA	NA	NA	88	96	89	95	100	97	97	90	80
Administrative	NA	NA	NA	NA	NA	88	NA	89	95	100	97	97	90	80
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	97	90	NA	NA	NA

Rwanda - Hib3

RWA - Hib3

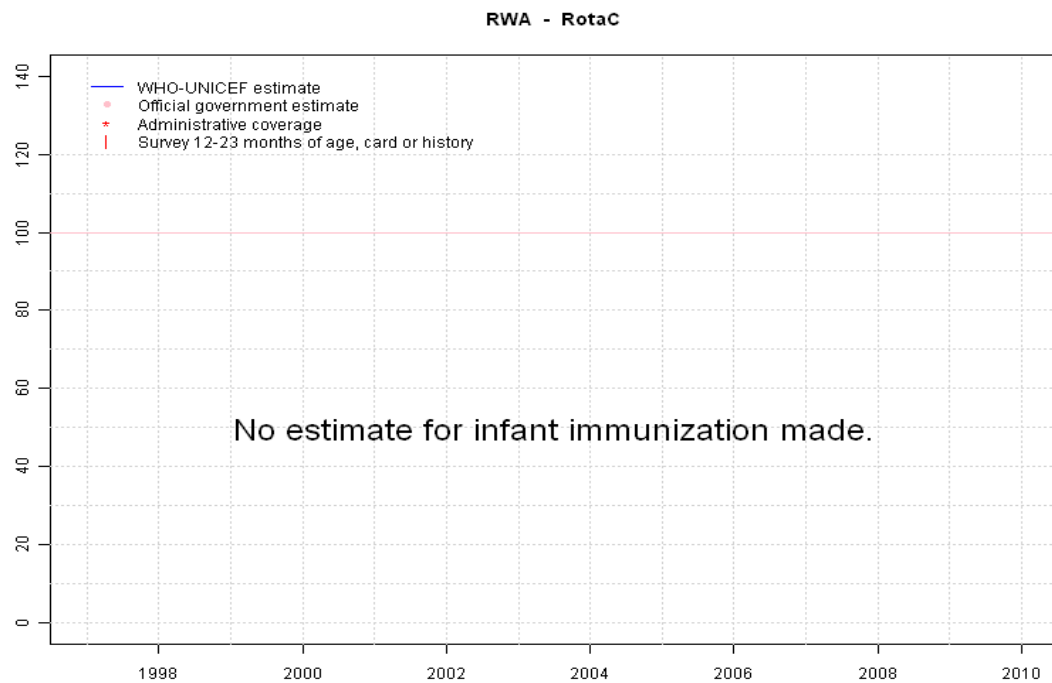


Description:

- 2002: Estimate based on reported data. Hib introduced in 2002 Vaccine presentation is DTP-HepB-Hib.
- 2003: Estimate based on reported data.
- 2004: Estimate based on reported data.
- 2005: Estimate based on reported data.
- 2006: Estimate based on reported data. 97 percent survey results supports reported data of 100 percent. Survey results of 97 percent modified for recall bias to 97 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 99 percent and 3d dose card only coverage of 97 percent.
- 2007: Estimate based on reported data. 94 percent survey results supports reported data of 96 percent. Survey results of 90 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 67 percent and 3d dose card only coverage of 66 percent.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data. Current estimate of 90 percent changed from previous revision value of 97 percent.
- 2010: Estimate based on reported data. Estimate based on reported coverage.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	88	96	89	95	99	96	97	90	80
Official	NA	NA	NA	NA	NA	88	96	89	95	100	96	97	90	80
Administrative	NA	NA	NA	NA	NA	88	96	89	95	100	97	97	90	80
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	97	90	NA	NA	NA

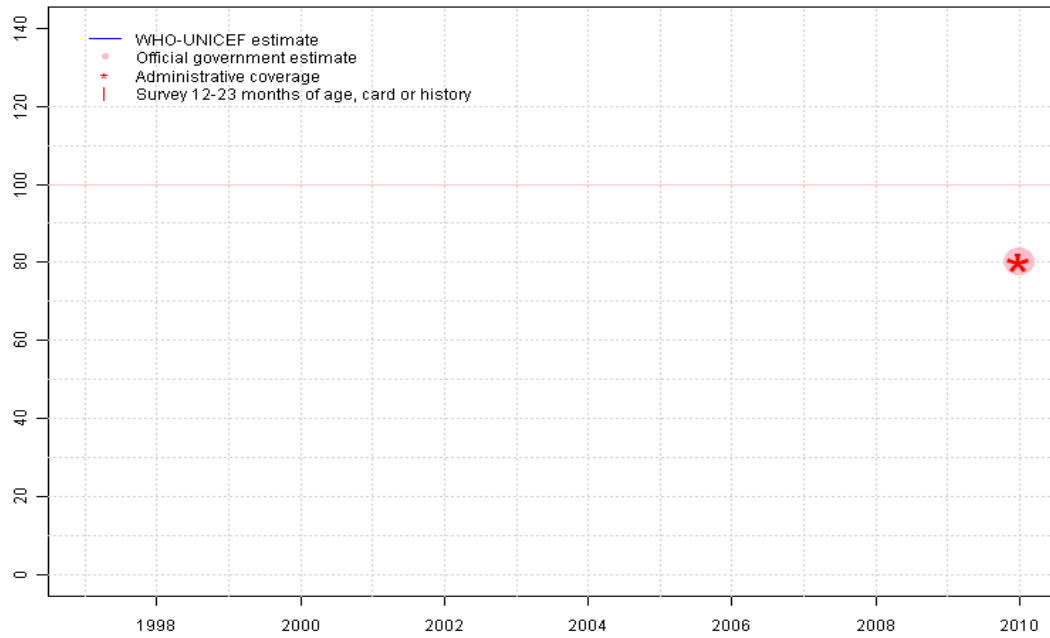
Rwanda - RotaC



	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

Rwanda - PcV3

RWA - PcV3



Description:

2010: Estimate based on reported data. PCV vaccine introduced in 2009. Reporting started in 2010. Estimate based on reported coverage.

	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	80
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	80
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	80
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Rwanda - survey details

2007 Rwanda Interim Demographic and Health Survey 2007-08

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	67	12-23 m	1226	67
BCG	History	29	12-23 m	1226	67
BCG	Card or History	96	12-23 m	1226	67
BCG	C or H <12 months	95	12-23 m	1226	67
DTP1	C or H <12 months	94	12-23 m	1226	67
DTP1	Card	67	12-23 m	1226	67
DTP1	History	28	12-23 m	1226	67
DTP1	Card or History	95	12-23 m	1226	67
DTP3	Card or History	90	12-23 m	1226	67
DTP3	C or H <12 months	88	12-23 m	1226	67
DTP3	Card	66	12-23 m	1226	67
DTP3	History	24	12-23 m	1226	67
HepB1	C or H <12 months	94	12-23 m	1226	67
HepB1	Card or History	95	12-23 m	1226	67
HepB1	Card	67	12-23 m	1226	67
HepB1	History	28	12-23 m	1226	67
HepB3	C or H <12 months	88	12-23 m	1226	67
HepB3	Card or History	90	12-23 m	1226	67
HepB3	History	24	12-23 m	1226	67
HepB3	Card	66	12-23 m	1226	67
Hib1	Card	67	12-23 m	1226	67
Hib1	Card or History	95	12-23 m	1226	67
Hib1	C or H <12 months	94	12-23 m	1226	67
Hib1	History	28	12-23 m	1226	67
Hib3	History	24	12-23 m	1226	67
Hib3	Card	66	12-23 m	1226	67
Hib3	C or H <12 months	88	12-23 m	1226	67
Hib3	Card or History	90	12-23 m	1226	67
MCV	History	26	12-23 m	1226	67
MCV	Card or History	90	12-23 m	1226	67
MCV	C or H <12 months	83	12-23 m	1226	67
MCV	Card	64	12-23 m	1226	67
Pol1	C or H <12 months	95	12-23 m	1226	67
Pol1	Card or History	96	12-23 m	1226	67
Pol1	History	29	12-23 m	1226	67
Pol1	Card	67	12-23 m	1226	67
Pol3	Card	66	12-23 m	1226	67

Pol3	History	20	12-23 m	1226	67
Pol3	C or H <12 months	84	12-23 m	1226	67
Pol3	Card or History	86	12-23 m	1226	67

2006 Enquête nationale de couverture vaccinale à Rwanda, 2007

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	94	12-23 m	1049	82
BCG	Card or History	98	12-23 m	1049	82
DTP1	Card	99	12-23 m	1049	82
DTP1	Card or History	99	12-23 m	1049	82
DTP3	Card or History	97	12-23 m	1049	82
DTP3	Card	97	12-23 m	1049	82
HepB1	Card or History	99	12-23 m	1049	82
HepB1	Card	99	12-23 m	1049	82
HepB3	Card	97	12-23 m	1049	82
HepB3	Card or History	97	12-23 m	1049	82
Hib1	Card	99	12-23 m	1049	82
Hib1	Card or History	99	12-23 m	1049	82
Hib3	Card or History	97	12-23 m	1049	82
Hib3	Card	97	12-23 m	1049	82
MCV	Card	95	12-23 m	1049	82
MCV	Card or History	96	12-23 m	1049	82
Pol1	Card	98	12-23 m	1049	82
Pol1	Card or History	98	12-23 m	1049	82
Pol3	Card	97	12-23 m	1049	82
Pol3	Card or History	97	12-23 m	1049	82

2004 Rwanda Demographic and Health Survey 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	History	21	12-23 m	1626	76
BCG	Card or History	96	12-23 m	1626	76
BCG	Card	75	12-23 m	1626	76
BCG	C or H <12 months	96	12-23 m	1626	76
DTP1	C or H <12 months	96	12-23 m	1626	76
DTP1	History	21	12-23 m	1626	76
DTP1	Card	76	12-23 m	1626	76

Rwanda - survey details

DTP1	Card or History	97	12-23 m	1626	76
DTP3	C or H <12 months	86	12-23 m	1626	76
DTP3	Card	73	12-23 m	1626	76
DTP3	Card or History	87	12-23 m	1626	76
DTP3	History	14	12-23 m	1626	76
MCV	C or H <12 months	79	12-23 m	1626	76
MCV	History	19	12-23 m	1626	76
MCV	Card or History	86	12-23 m	1626	76
MCV	Card	67	12-23 m	1626	76
Pol1	Card or History	96	12-23 m	1626	76
Pol1	Card	76	12-23 m	1626	76
Pol1	History	21	12-23 m	1626	76
Pol1	C or H <12 months	96	12-23 m	1626	76
Pol3	C or H <12 months	84	12-23 m	1626	76
Pol3	Card	73	12-23 m	1626	76
Pol3	Card or History	84	12-23 m	1626	76
Pol3	History	12	12-23 m	1626	76

DTP1	History	19	12-23 m	596	61
DTP3	Card	69	12-23 m	596	61
DTP3	Card or History	81	12-23 m	596	61
DTP3	History	12	12-23 m	596	61
MCV	Card or History	83	12-23 m	596	61
MCV	Card	64	12-23 m	596	61
MCV	History	19	12-23 m	596	61
Pol1	Card	72	12-23 m	596	61
Pol1	Card or History	92	12-23 m	596	61
Pol1	History	20	12-23 m	596	61
Pol3	History	11	12-23 m	596	61
Pol3	Card	70	12-23 m	596	61
Pol3	Card or History	89	12-23 m	596	61

1999 Enquête Démographique et de Santé Rwanda 2000 (EDSR-II), 2001

2002 Rwanda, Evaluation de la campagne contre la rougeole et la vaccination de routine, 2003 - documentation not available

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	99	12-23 m	0	79
DTP1	C or H <12 months	97	12-23 m	0	79
DTP3	C or H <12 months	92	12-23 m	0	79
MCV	C or H <12 months	92	12-23 m	0	79
Pol3	C or H <12 months	87	12-23 m	0	79

1999 Enquête à Indicateurs Multiples (MICS2), Rapport préliminaire, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	History	19	12-23 m	596	61
BCG	Card	73	12-23 m	596	61
BCG	Card or History	92	12-23 m	596	61
DTP1	Card	72	12-23 m	596	61
DTP1	Card or History	91	12-23 m	596	61

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	History	31	12-23 m	1330	66
BCG	Card or History	97	12-23 m	1330	66
BCG	Card	66	12-23 m	1330	66
BCG	C or H <12 months	96	12-23 m	1330	66
DTP1	History	30	12-23 m	1330	66
DTP1	C or H <12 months	95	12-23 m	1330	66
DTP1	Card or History	96	12-23 m	1330	66
DTP1	Card	66	12-23 m	1330	66
DTP3	History	23	12-23 m	1330	66
DTP3	Card or History	86	12-23 m	1330	66
DTP3	C or H <12 months	85	12-23 m	1330	66
DTP3	Card	63	12-23 m	1330	66
MCV	C or H <12 months	80	12-23 m	1330	66
MCV	Card	59	12-23 m	1330	66
MCV	Card or History	87	12-23 m	1330	66
MCV	History	28	12-23 m	1330	66
Pol1	History	31	12-23 m	1330	66
Pol1	Card or History	96	12-23 m	1330	66
Pol1	Card	66	12-23 m	1330	66
Pol1	C or H <12 months	96	12-23 m	1330	66
Pol3	History	24	12-23 m	1330	66

Rwanda - survey details

Pol3	Card	64	12-23 m	1330	66
Pol3	Card or History	88	12-23 m	1330	66
Pol3	C or H <12 months	87	12-23 m	1330	66

1998 Enquête Démographique et de Santé Rwanda 2000 (EDSR-II), 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94	24-35 m	1232	54
DTP1	C or H <12 months	91	24-35 m	1232	54
DTP3	C or H <12 months	79	24-35 m	1232	54
MCV	C or H <12 months	80	24-35 m	1232	54
Pol1	C or H <12 months	93	24-35 m	1232	54
Pol3	C or H <12 months	80	24-35 m	1232	54

1998 Rapport d'Evaluation de la Couverture Vaccinale au Niveau des Onze Regions Sanitaires, Mai-Juni 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	94	12-23 m	0	0
DTP1	Card or History	93	12-23 m	0	0
DTP3	Card or History	85	12-23 m	0	0
MCV	Card or History	78	12-23 m	0	0
Pol1	Card or History	93	12-23 m	0	0
Pol3	Card or History	85	12-23 m	0	0

1997 Enquête Démographique et de Santé Rwanda 2000 (EDSR-II), 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	96	36-47 m	1297	42
DTP1	C or H <12 months	92	36-47 m	1297	42
DTP3	C or H <12 months	80	36-47 m	1297	42
MCV	C or H <12 months	74	36-47 m	1297	42
Pol1	C or H <12 months	94	36-47 m	1297	42
Pol3	C or H <12 months	82	36-47 m	1297	42

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

Rwanda

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	79
1998	84
1999	89
2000	81
2001	71
2002	79
2003	77
2004	77
2005	79
2006	82
2007	82
2008	85
2009	85
2010	85

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.