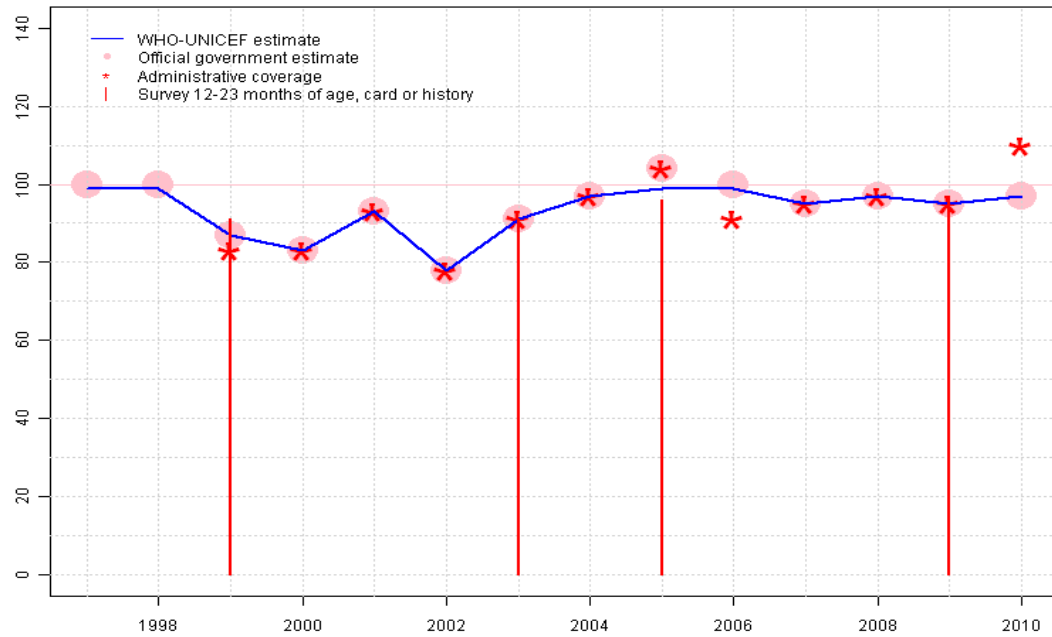


# Malawi - BCG

MWI - BCG



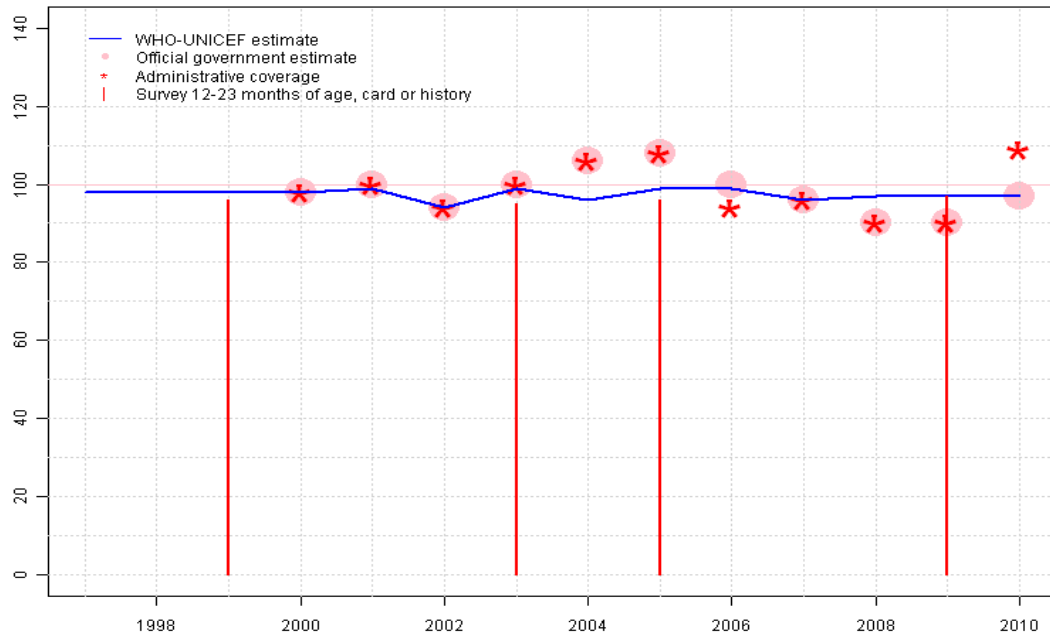
## Description:

- 1997: Legacy estimate.
- 1998: Reported data calibrated to 1997 and 1999 levels.
- 1999: Estimate based on reported data. 91 percent survey results supports reported data of 87 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. 91 percent survey results supports reported data of 91 percent.
- 2004: Estimate based on reported data.
- 2005: No accepted reported data. Reported data of 99 percent estimated by interpolation between 2004 and 2006 supports trend in reported data. 96 percent survey results Reported data of 104 percent greater than 100 percent.
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data. 97 percent survey results supports reported data of 95 percent.
- 2010: Estimate based on reported data. Sudden unexplained decrease in target population size from previous years National official estimates are based on preliminary results from DHS 2010.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	99	99	87	83	93	78	91	97	99	99	95	97	95	97
Official	100	100	87	83	93	78	91	97	104	100	95	97	95	97
Administrative	NA	NA	83	83	93	78	91	97	104	91	95	97	95	110
Survey	NA	NA	91	NA	NA	NA	91	NA	96	NA	NA	NA	97	NA

# Malawi - DTP1

MWI - DTP1



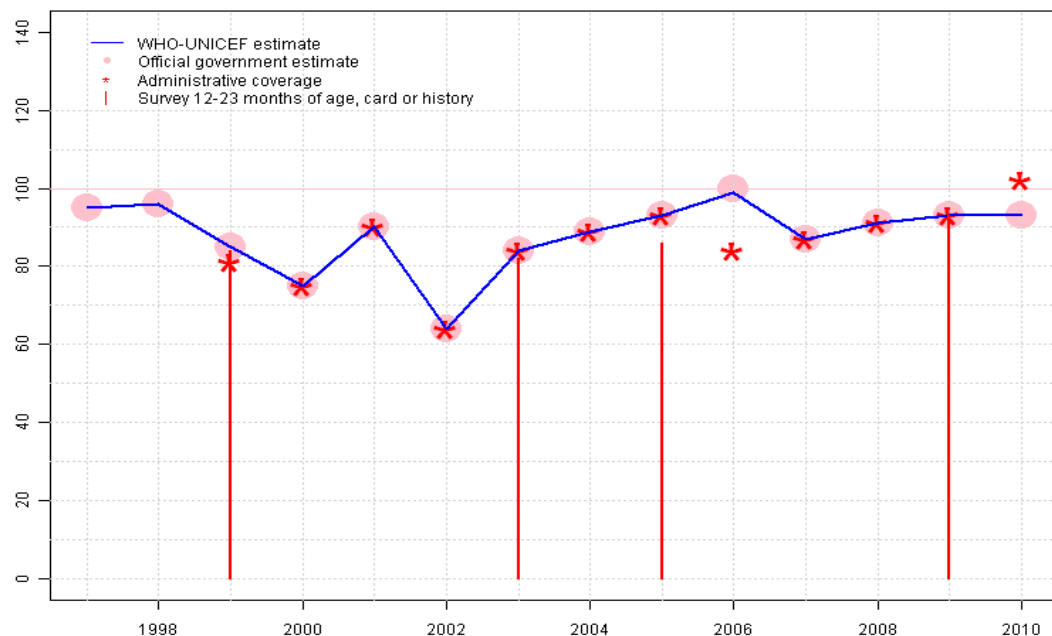
## Description:

- 1997: Legacy estimate.
- 1998: No DTP1 data. Estimate based on DTP3 coverage of 96.
- 1999: No accepted reported data. Reported data of 98 percent estimated by extrapolating from 2000 supports trend in reported data. 96 percent survey results
- 2000: Estimate based on reported data.
- 2001: Estimate based on reported data.
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data. 95 percent survey results supports reported data of 100 percent.
- 2004: No DTP1 data. Estimate based on DTP3 coverage of 89. Reported data of 106 percent greater than 100 percent. Current estimate of 96 percent changed from previous revision value of 99 percent.
- 2005: No accepted reported data. Reported data of 100 percent estimated by interpolation between 2003 and 2006 supports trend in reported data. 96 percent survey results Reported data of 108 percent greater than 100 percent.
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data.
- 2008: DTP1 coverage estimated based on DTP3 coverage of 91.
- 2009: DTP1 coverage estimated based on DTP3 coverage of 93.
- 2010: Estimate based on reported data. Sudden unexplained decrease in target population size from previous years National official estimates are based on preliminary results from DHS 2010.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	98	98	98	98	99	94	99	96	99	99	96	97	97	97
Official	NA	NA	NA	98	100	94	100	106	108	100	96	90	90	97
Administrative	NA	NA	NA	98	100	94	100	106	108	94	96	90	90	109
Survey	NA	NA	96	NA	NA	NA	95	NA	96	NA	NA	NA	97	NA

# Malawi - DTP3

MWI - DTP3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	95	96	85	75	90	64	84	89	93	99	87	91	93	93
Official	95	96	85	75	90	64	84	89	93	100	87	91	93	93
Administrative	NA	NA	81	75	90	64	84	89	93	84	87	91	93	102
Survey	NA	NA	84	NA	NA	NA	82	NA	86	NA	NA	NA	93	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on reported data.

1999: Estimate based on reported data. 89 percent survey results supports reported data of 85 percent. Survey results of 84 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 80 percent and 3d dose card only coverage of 74 percent.

2000: Estimate based on reported data.

2001: Estimate based on reported data. The increase in the nationally reported number of children vaccinated confirms the rise in coverage.

2002: Estimate based on reported data.

2003: Estimate based on reported data. 87 percent survey results supports reported data of 84 percent. Survey results of 82 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 73 percent and 3d dose card only coverage of 67 percent.

2004: Estimate based on reported data.

2005: Estimate based on reported data. 92 percent survey results supports reported data of 93 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 76 percent and 3d dose card only coverage of 73 percent.

2006: Estimate based on reported data.

2007: Estimate based on reported data.

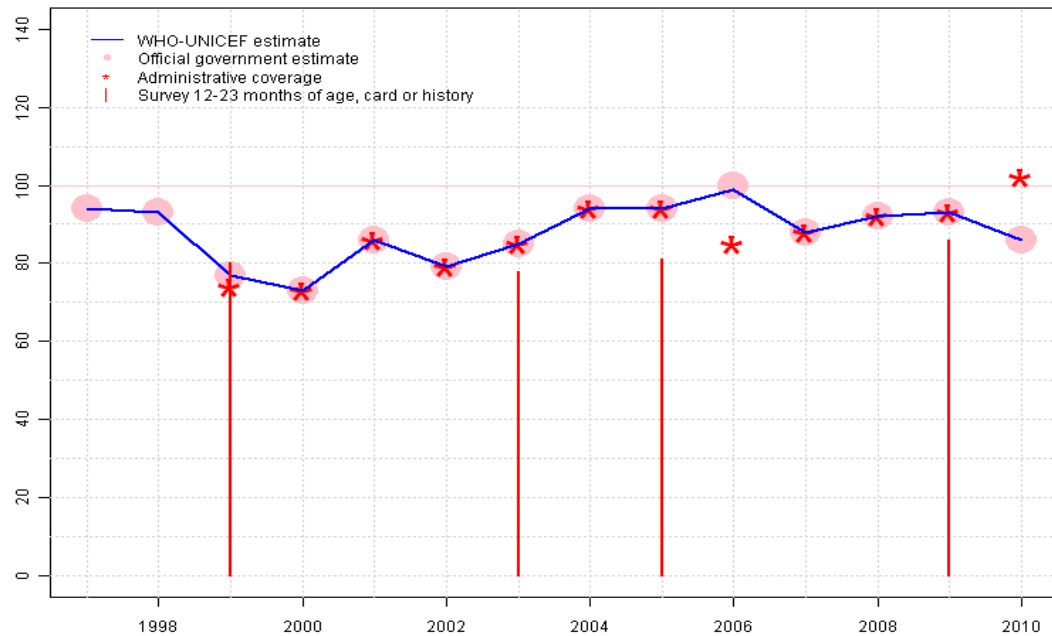
2008: Estimate based on reported data.

2009: Estimate based on reported data. 93 percent survey results supports reported data of 93 percent.

2010: Estimate based on reported data. Sudden unexplained decrease in target population size from previous years. National official estimates are based on preliminary results from DHS 2010.

# Malawi - Pol3

MWI - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	94	93	77	73	86	79	85	94	94	99	88	92	93	86
Official	94	93	77	73	86	79	85	94	94	100	88	92	93	86
Administrative	NA	NA	74	73	86	79	85	94	94	85	88	92	93	102
Survey	NA	NA	80	NA	NA	NA	78	NA	81	NA	NA	NA	86	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on reported data.

1999: Estimate based on reported data. 86 percent survey results supports reported data of 77 percent. Survey results of 80 percent modified for recall bias to 86 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 80 percent and 3d dose card only coverage of 72 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. 86 percent survey results supports reported data of 85 percent. Survey results of 78 percent modified for recall bias to 86 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 74 percent and 3d dose card only coverage of 67 percent.

2004: Estimate based on reported data.

2005: Estimate based on reported data. 91 percent survey results supports reported data of 94 percent. Survey results of 81 percent modified for recall bias to 91 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 72 percent.

2006: Estimate based on reported data.

2007: Estimate based on reported data.

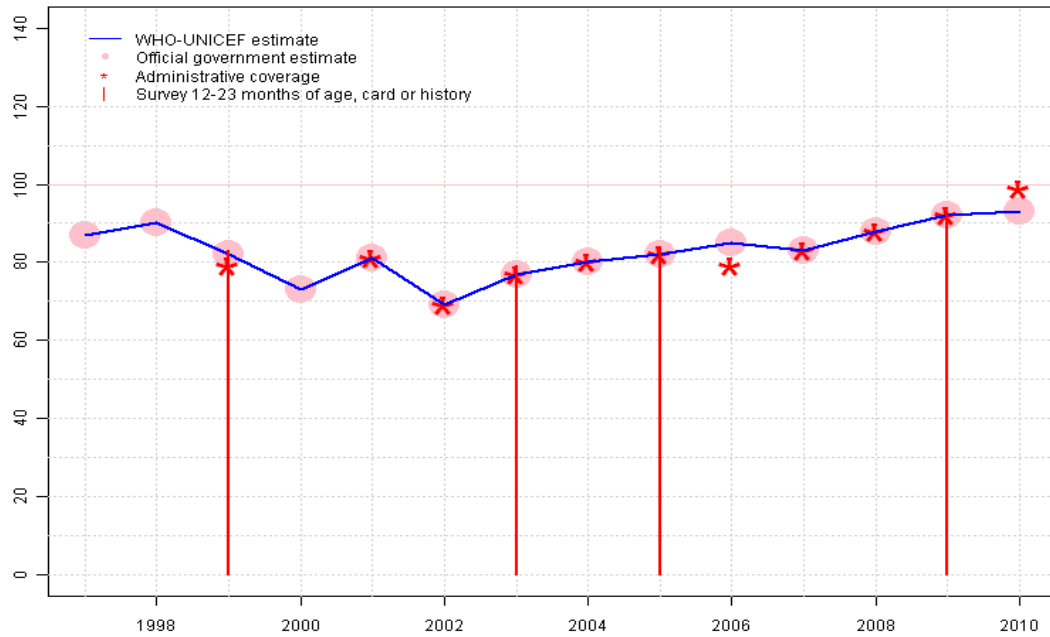
2008: Estimate based on reported data.

2009: Estimate based on reported data. 86 percent survey results supports reported data of 93 percent.

2010: Estimate based on reported data. Sudden unexplained decrease in target population size from previous years. National official estimates are based on preliminary results from DHS 2010.

# Malawi - MCV

MWI - MCV



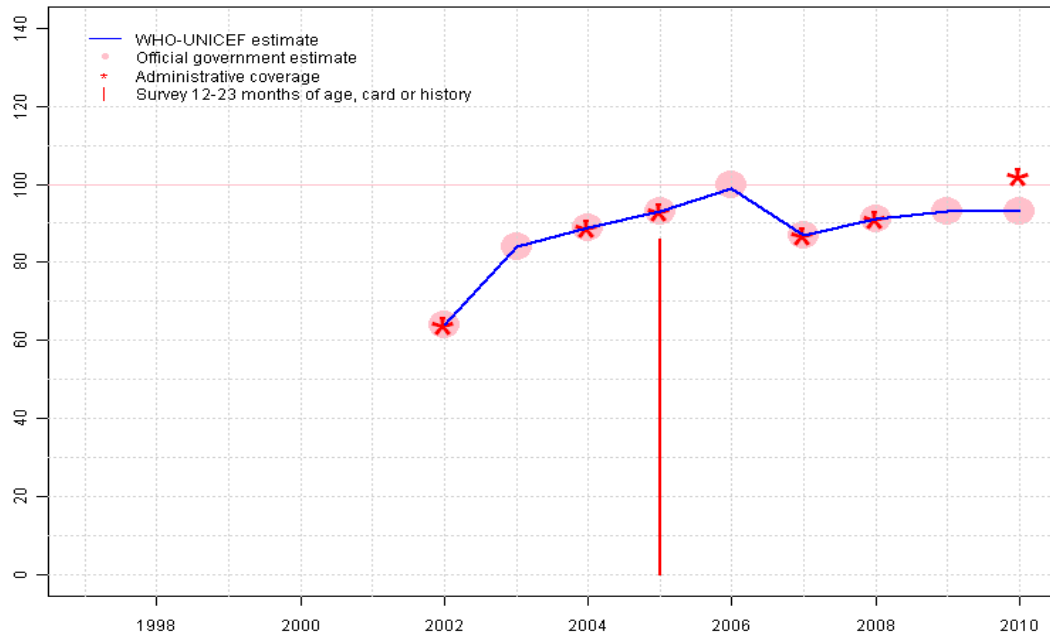
## Description:

- 1997: Legacy estimate.
- 1998: Estimate based on reported data.
- 1999: Estimate based on reported data. 83 percent survey results supports reported data of 82 percent.
- 2000: Estimate based on reported data.
- 2001: Estimate based on reported data. Current estimate of 81 percent changed from previous revision value of 82 percent.
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data. 79 percent survey results supports reported data of 77 percent.
- 2004: Estimate based on reported data.
- 2005: Estimate based on reported data. 84 percent survey results supports reported data of 82 percent.
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data. 93 percent survey results supports reported data of 92 percent.
- 2010: Estimate based on reported data. Sudden unexplained decrease in target population size from previous years. National official estimates are based on preliminary results from DHS 2010.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	87	90	82	73	81	69	77	80	82	85	83	88	92	93
Official	87	90	82	73	81	69	77	80	82	85	83	88	92	93
Administrative	NA	NA	79	NA	81	69	77	80	82	79	83	88	92	99
Survey	NA	NA	83	NA	NA	NA	79	NA	84	NA	NA	NA	93	NA

# Malawi - HepB3

MWI - HepB3



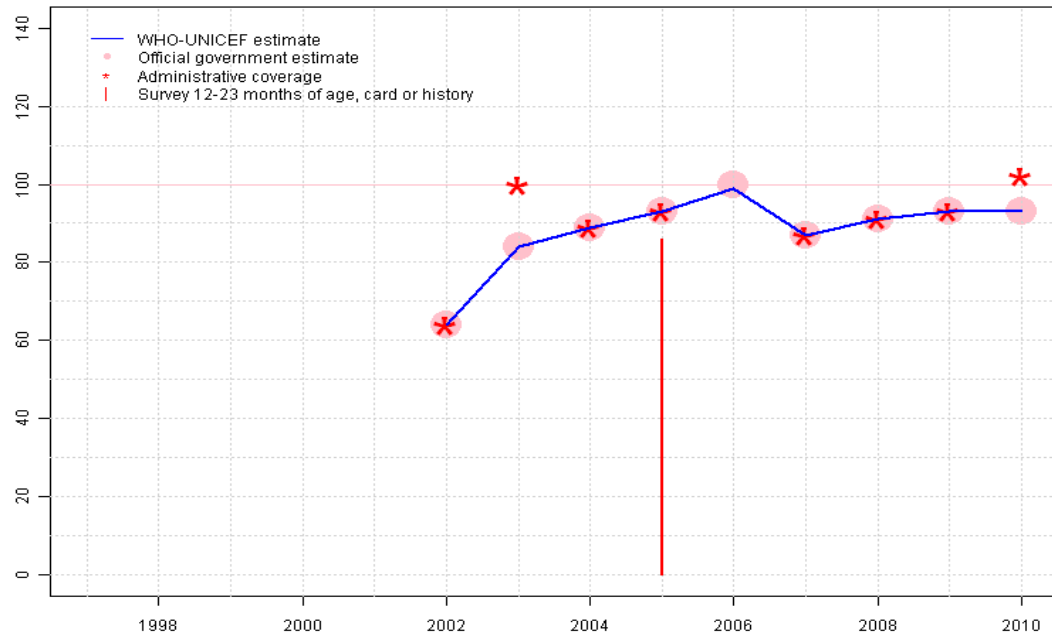
## Description:

- 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. 92 percent survey results supports reported data of 93 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 76 percent and 3d dose card only coverage of 73 percent.
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data.
- 2010: Estimate based on reported data. Sudden unexplained decrease in target population size from previous years National official estimates are based on preliminary results from DHS 2010.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	64	84	89	93	99	87	91	93	93
Official	NA	NA	NA	NA	NA	64	84	89	93	100	87	91	93	93
Administrative	NA	NA	NA	NA	NA	64	NA	89	93	NA	87	91	NA	102
Survey	NA	NA	NA	NA	NA	NA	NA	NA	86	NA	NA	NA	NA	NA

# Malawi - Hib3

MWI - Hib3

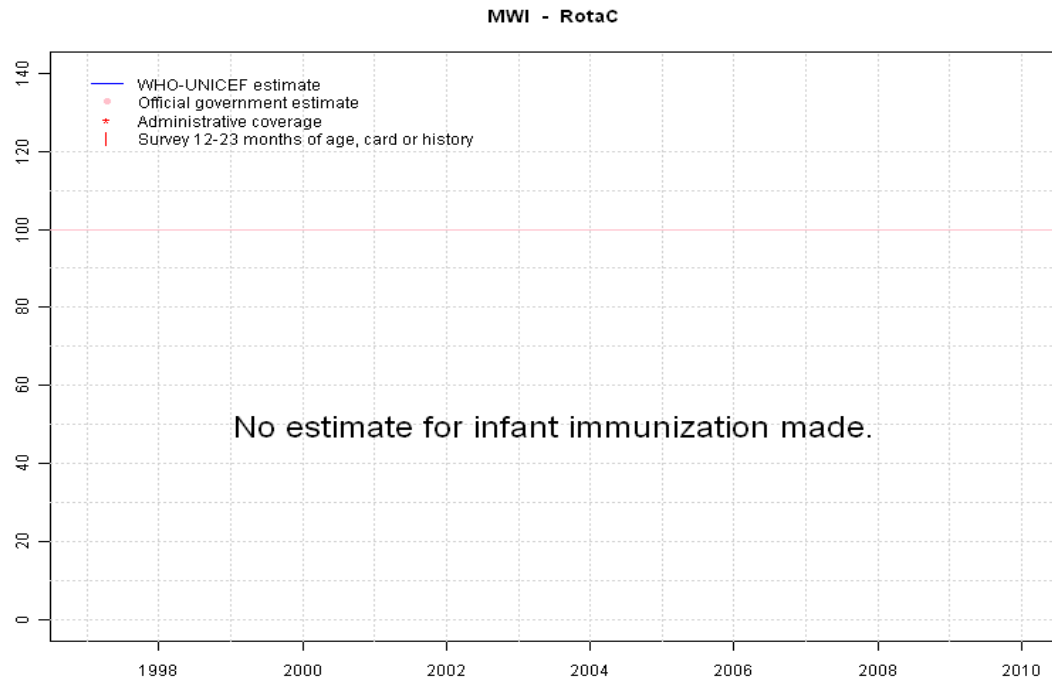


## Description:

- 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. 92 percent survey results supports reported data of 93 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 76 percent and 3d dose card only coverage of 73 percent.
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data.
- 2010: Estimate based on reported data. Sudden unexplained decrease in target population size from previous years National official estimates are based on preliminary results from DHS 2010.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	64	84	89	93	99	87	91	93	93
Official	NA	NA	NA	NA	NA	64	84	89	93	100	87	91	93	93
Administrative	NA	NA	NA	NA	NA	64	100	89	93	NA	87	91	93	102
Survey	NA	NA	NA	NA	NA	NA	NA	NA	86	NA	NA	NA	NA	NA

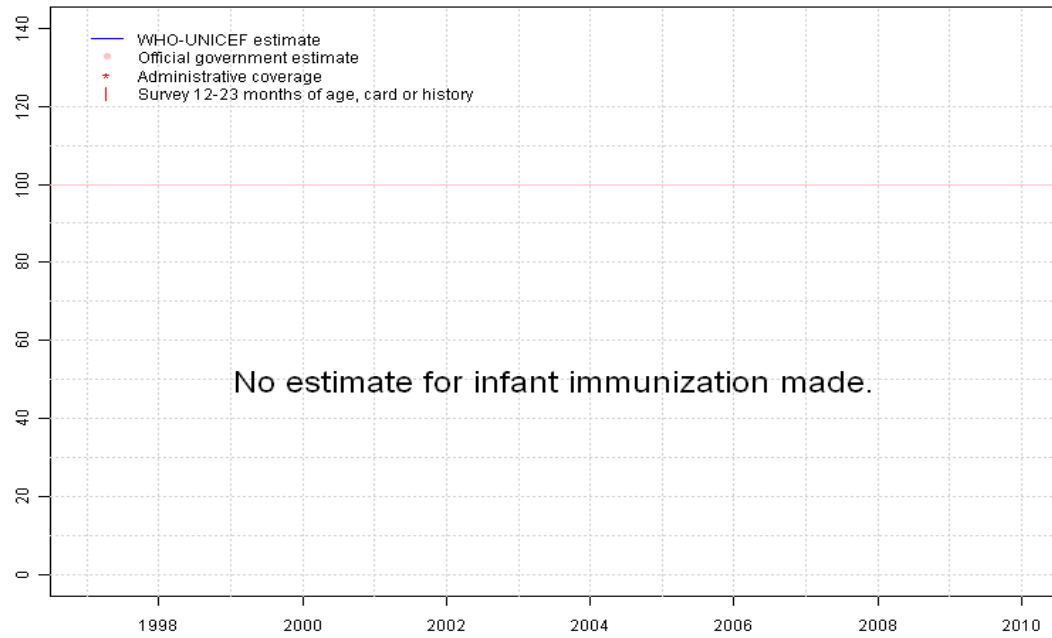
# Malawi - RotaC



	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

# Malawi - PcV3

MWI - 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

# Malawi - survey details

## 2009 Malawi Demographic and Health Survey 2010, Preliminary Report

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	97	12-23 m	3774	81
DTP1	Card or History	97	12-23 m	3774	81
DTP3	Card or History	93	12-23 m	3774	81
MCV	Card or History	93	12-23 m	3774	81
Pol1	Card or History	97	12-23 m	3774	81
Pol3	Card or History	86	12-23 m	3774	81

## 2005 Malawi Multiple Indicator Cluster Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	96	12-23 m	5080	77
BCG	History	21	12-23 m	5080	77
BCG	Card	75	12-23 m	5080	77
BCG	C or H <12 months	95	12-23 m	5080	77
DTP1	Card	76	12-23 m	5080	77
DTP1	Card or History	96	12-23 m	5080	77
DTP1	History	21	12-23 m	5080	77
DTP1	C or H <12 months	95	12-23 m	5080	77
DTP3	C or H <12 months	84	12-23 m	5080	77
DTP3	Card	73	12-23 m	5080	77
DTP3	Card or History	86	12-23 m	5080	77
DTP3	History	14	12-23 m	5080	77
HepB1	History	21	12-23 m	5080	77
HepB1	Card or History	96	12-23 m	5080	77
HepB1	C or H <12 months	95	12-23 m	5080	77
HepB1	Card	76	12-23 m	5080	77
HepB3	C or H <12 months	84	12-23 m	5080	77
HepB3	Card	73	12-23 m	5080	77
HepB3	Card or History	86	12-23 m	5080	77
HepB3	History	14	12-23 m	5080	77
Hib1	C or H <12 months	95	12-23 m	5080	77
Hib1	Card	76	12-23 m	5080	77
Hib1	Card or History	96	12-23 m	5080	77
Hib1	History	21	12-23 m	5080	77

Hib3	C or H <12 months	84	12-23 m	5080	77
Hib3	Card or History	86	12-23 m	5080	77
Hib3	History	14	12-23 m	5080	77
Hib3	Card	73	12-23 m	5080	77
MCV	C or H <12 months	76	12-23 m	5080	77
MCV	Card	66	12-23 m	5080	77
MCV	Card or History	84	12-23 m	5080	77
MCV	History	19	12-23 m	5080	77
Pol1	Card	76	12-23 m	5080	77
Pol1	Card or History	96	12-23 m	5080	77
Pol1	C or H <12 months	95	12-23 m	5080	77
Pol1	History	20	12-23 m	5080	77
Pol3	History	9	12-23 m	5080	77
Pol3	C or H <12 months	79	12-23 m	5080	77
Pol3	Card	72	12-23 m	5080	77
Pol3	Card or History	81	12-23 m	5080	77

## 2003 Malawi Demographic and Health Survey 2004

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	90	12-23 m	2194	74
BCG	Card	70	12-23 m	2194	74
BCG	Card or History	91	12-23 m	2194	74
BCG	History	21	12-23 m	2194	74
DTP1	History	22	12-23 m	2194	74
DTP1	Card or History	95	12-23 m	2194	74
DTP1	C or H <12 months	94	12-23 m	2194	74
DTP1	Card	73	12-23 m	2194	74
DTP3	C or H <12 months	76	12-23 m	2194	74
DTP3	History	14	12-23 m	2194	74
DTP3	Card or History	82	12-23 m	2194	74
DTP3	Card	67	12-23 m	2194	74
MCV	History	17	12-23 m	2194	74
MCV	Card or History	79	12-23 m	2194	74
MCV	Card	62	12-23 m	2194	74
MCV	C or H <12 months	63	12-23 m	2194	74
Pol1	Card	74	12-23 m	2194	74
Pol1	Card or History	95	12-23 m	2194	74
Pol1	History	21	12-23 m	2194	74

# Malawi - survey details

Pol1	C or H <12 months	94	12-23 m	2194	74
Pol3	C or H <12 months	73	12-23 m	2194	74
Pol3	Card	67	12-23 m	2194	74
Pol3	Card or History	78	12-23 m	2194	74
Pol3	History	10	12-23 m	2194	74

1999 Malawi Demographic and Health Survey 2000, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	90	12-23 m	2238	81
BCG	History	15	12-23 m	2238	81
BCG	Card	77	12-23 m	2238	81
BCG	Card or History	91	12-23 m	2238	81
DTP1	C or H <12 months	94	12-23 m	2238	81
DTP1	Card	80	12-23 m	2238	81
DTP1	Card or History	96	12-23 m	2238	81
DTP1	History	16	12-23 m	2238	81
DTP3	History	10	12-23 m	2238	81
DTP3	Card or History	84	12-23 m	2238	81
DTP3	Card	74	12-23 m	2238	81
DTP3	C or H <12 months	79	12-23 m	2238	81
MCV	Card	70	12-23 m	2238	81
MCV	Card or History	83	12-23 m	2238	81
MCV	History	13	12-23 m	2238	81
MCV	C or H <12 months	64	12-23 m	2238	81

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

[http://www.childinfo.org/immunization\\_countryreports.html](http://www.childinfo.org/immunization_countryreports.html)

[http://www.who.int/immunization\\_monitoring/routine/immunization\\_coverage/en/index4.html](http://www.who.int/immunization_monitoring/routine/immunization_coverage/en/index4.html)

Pol1	C or H <12 months	93	12-23 m	2238	81
Pol1	Card	80	12-23 m	2238	81
Pol1	Card or History	96	12-23 m	2238	81
Pol1	History	16	12-23 m	2238	81
Pol3	Card or History	80	12-23 m	2238	81
Pol3	History	7	12-23 m	2238	81
Pol3	Card	72	12-23 m	2238	81
Pol3	C or H <12 months	73	12-23 m	2238	81

1998 National EPI Comprehensive Review Report, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	86	11-23 m	210	93
BCG	Card or History	92	11-23 m	210	93
DTP1	Card or History	97	11-23 m	210	93
DTP1	Card	91	11-23 m	210	93
DTP3	Card or History	94	11-23 m	210	93
DTP3	Card	88	11-23 m	210	93
MCV	Card or History	90	11-23 m	210	93
MCV	Card	85	11-23 m	210	93
Pol1	Card or History	97	11-23 m	210	93
Pol1	Card	91	11-23 m	210	93
Pol3	Card	87	11-23 m	210	93
Pol3	Card or History	93	11-23 m	210	93

## Malawi

### 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	87
1998	89
1999	84
2000	84
2001	87
2002	85
2003	87
2004	86
2005	86
2006	88
2007	86
2008	87
2009	87
2010	87

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<sup>1</sup> 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.