

**WHO/UNICEF  
Review of National Immunization Coverage  
1980-2008**

---

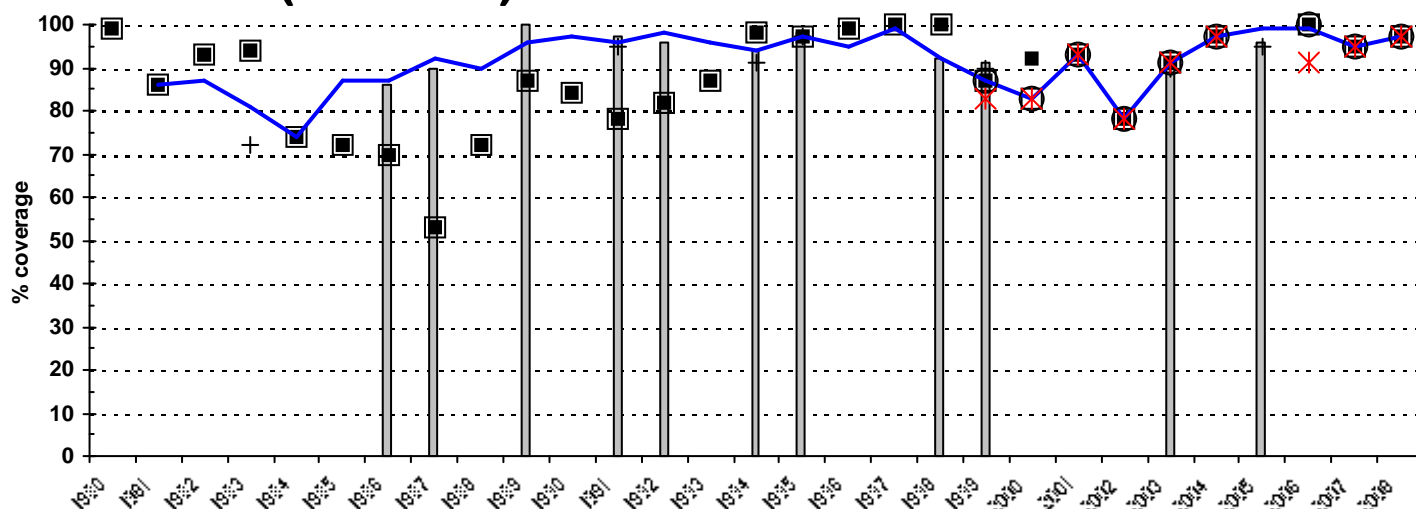
***Malawi***

---

**July, 2009**

# Malawi

## BCG (1980-2008)



### Description of trend

Survey data available for almost every two years since 1986 consistently show high coverage levels. Since 1999 estimates are based on reported data supported by survey results.

### Data presented in chart

Year	WHO/ UNICEF estimate (%)	Reported to:*		Government official estimate (%)	Reported doses administered (%)**	Survey data (%)***	
		WHO (%)	UNICEF (%)			Survey 12-23 months	Survey <12 months
1980		99	99				
1981	86	86	86				
1982	87	93	93				
1983	81	94	94				72
1984	74	74	74				
1985	87	72	72				
1986	87	70	70			86	
1987	92	53	53			90	
1988	90	72	72				
1989	96	87	87			100	
1990	97	84	84				
1991	96	78	78			97	95
1992	98	82	82			96	
1993	96	87	87				
1994	94	98	98			94	91
1995	97	97	97			98	97
1996	95	99	99				
1997	99	100	100				
1998	92	100	100			92	
1999	87	87	87	87	83	91	90
2000	83	83	92	83	83		
2001	93	93	93	93	93		
2002	78	78	78	78	78		
2003	91	91	91	91	91	91	90
2004	97	97	97	97	97		
2005	99	104	104	104	104	96	95
2006	99	100	100	100	91		
2007	95	95	95	95	95		
2008	97	97	97	97	97		

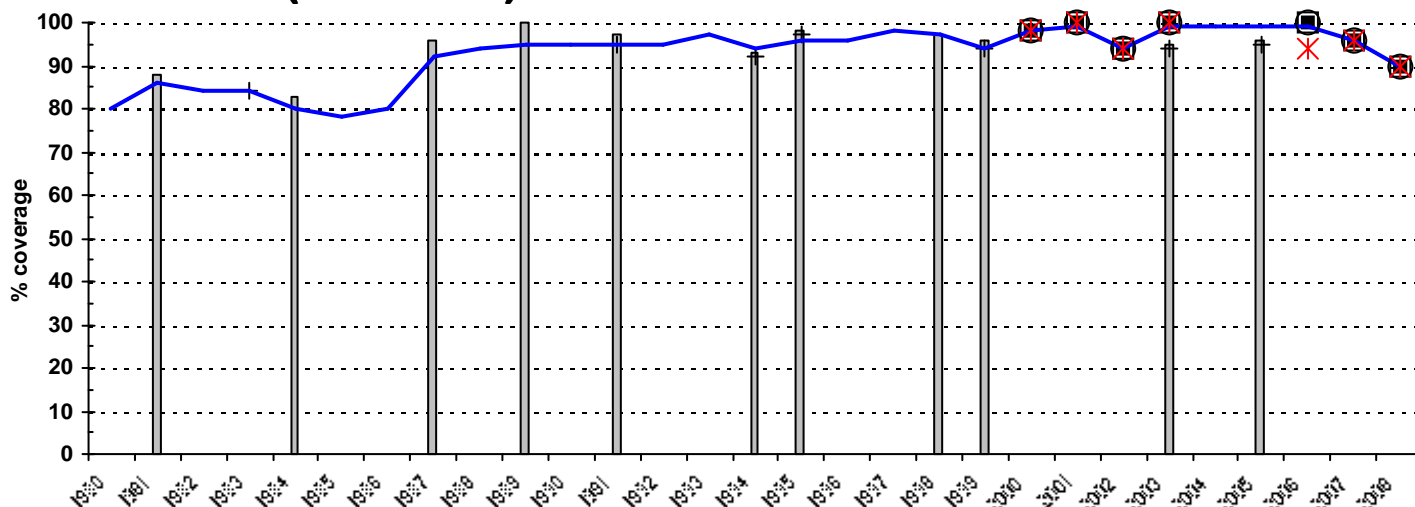
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Malawi

## DTP1 (1980-2008)



### Description of trend

WHO and UNICEF began requesting data on DTP1 coverage in 2001 and have received national reports reflecting DTP1 coverage from 2001 onward. The DTP1 estimates from 2001 onwards are based on these reports. For years prior to 2001 the estimates are derived from the WHO/UNICEF estimates of DTP3 and the relationship between the levels of DTP3 coverage and the drop-out between DTP1 and DTP3. This relationship results from an analysis of 282 surveys conducted in 101 countries which were published between 1980 and 2004. Survey data available for almost every two years since 1986 consistently show high coverage levels. Since 1999 estimates are based on reported data supported by survey results.

### Data presented in chart

Year	WHO/ UNICEF estimate (%)	Reported to:*		Government official estimate (%)	Reported doses administered (%)**	Survey data (%)***	
		WHO (%)	UNICEF (%)			Survey 12-23 months	Survey <12 months
1980	80						
1981	86					88	
1982	84						84
1983	84						
1984	80					83	
1985	78						
1986	80						
1987	92					96	
1988	94						
1989	95					100	
1990	95						
1991	95					97	95
1992	95						
1993	97						
1994	94					93	92
1995	96					98	97
1996	96						
1997	98						
1998	97					97	
1999	94					96	94
2000	98	98	98	98	98		
2001	99	100	100	100	100		
2002	94	94	94	94	94		
2003	99	100	100	100	100	95	94
2004	99	106	106	106	106		
2005	99	108	108	108	108	96	95
2006	99	100	100	100	94		
2007	96	96	96	96	96		
2008	90	90	90	90	90		

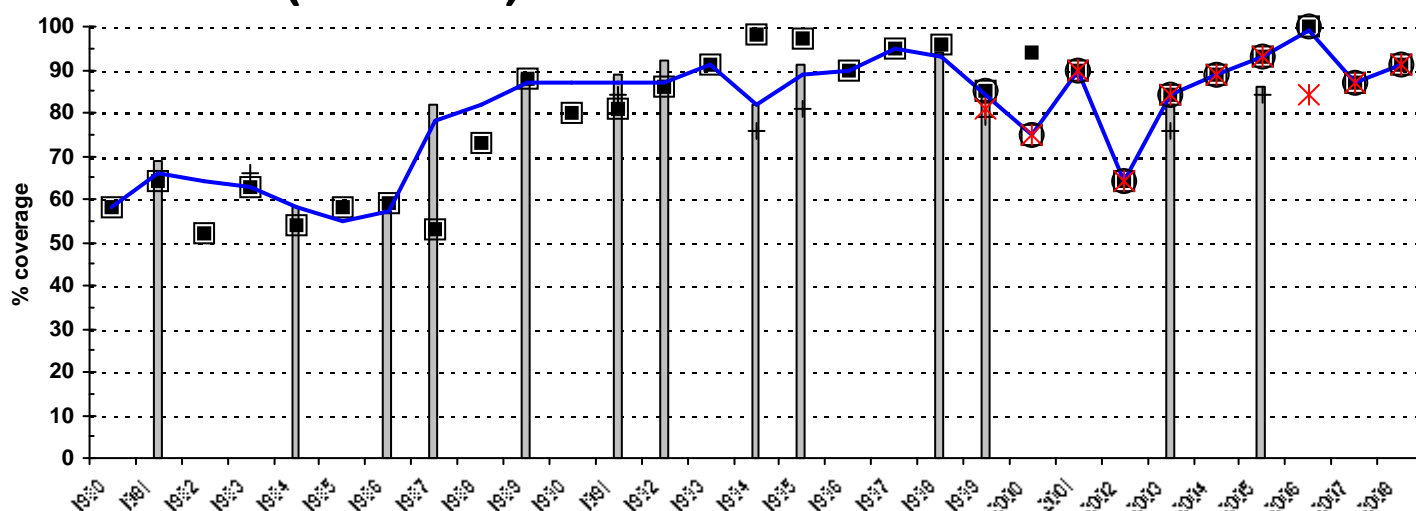
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Malawi

## DTP3 (1980-2008)



### Description of trend

Survey data available for almost every two years since 1986 consistently shows high coverage levels. Since 1999 estimates are based on reported data supported by survey results.

### Data presented in chart

Year	WHO/ UNICEF estimate (%)	Reported to:*		Government official estimate (%)	Reported doses administered (%)**	Survey data (%)***	
		WHO (%)	UNICEF (%)			Survey 12-23 months	Survey <12 months
1980	58	58	58				
1981	66	64	64			69	
1982	64	52	52				
1983	63	63	63				66
1984	58	54	54			58	
1985	55	58	58				
1986	57	59	59			57	
1987	78	53	53			82	
1988	82	73	73				
1989	87	88	88			89	
1990	87	80	80				
1991	87	81	81			89	84
1992	87	86	86			92	
1993	91	91	91				
1994	82	98	98			82	76
1995	89	97	97			91	81
1996	90	90	90				
1997	95	95	95				
1998	93	96	96			94	
1999	84	85	85	85	81	84	79
2000	75	75	94	75	75		
2001	90	90	90	90	90		
2002	64	64	64	64	64		
2003	84	84	84	84	84	82	76
2004	89	89	89	89	89		
2005	93	93	93	93	93	86	84
2006	99	100	100	100	84		
2007	87	87	87	87	87		
2008	91	91	91	91	91		

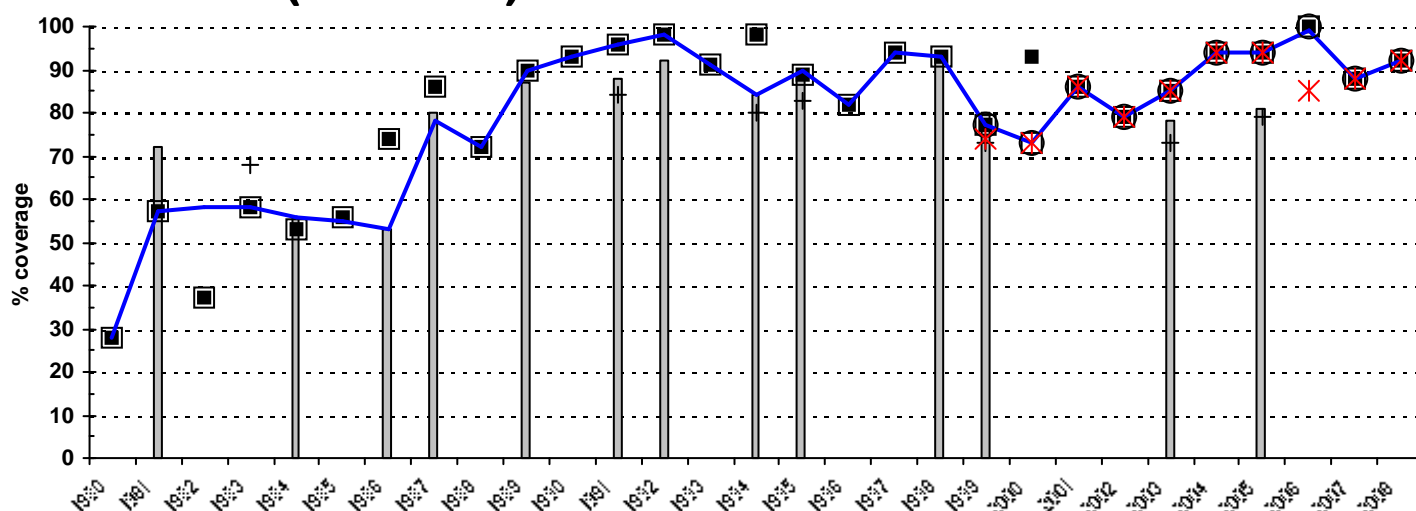
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Malawi

## Pol3 (1980-2008)



### Description of trend

Survey data available for almost every two years since 1986 consistently show high coverage levels. Since 1999 estimates are based on reported data supported by survey results.

### Data presented in chart

Year	WHO/ UNICEF estimate (%)	Reported to:*		Government official estimate (%)	Reported doses administered (%)**	Survey data (%)***	
		WHO (%)	UNICEF (%)			Survey 12-23 months	Survey <12 months
1980	28	28	28				
1981	57	57	57			72	
1982	37	37	37				
1983	58	58	58				68
1984	56	53	53			56	
1985	55	56	56				
1986	53	74	74			53	
1987	78	86	86			80	
1988	72	72	72				
1989	90	90	90			87	
1990	93	93	93				
1991	96	96	96			88	84
1992	98	98	98			92	
1993	91	91	91				
1994	84	98	98			84	80
1995	90	89	89			89	83
1996	82	82	82				
1997	94	94	94				
1998	93	93	93			93	
1999	77	77	77	77	74	80	73
2000	73	73	73	73	73		
2001	86	86	86	86	86		
2002	79	79	79	79	79		
2003	85	85	85	85	85	78	73
2004	94	94	94	94	94		
2005	94	94	94	94	94		
2006	99	100	100	100	85	81	79
2007	88	88	88	88	88		
2008	92	92	92	92	92		

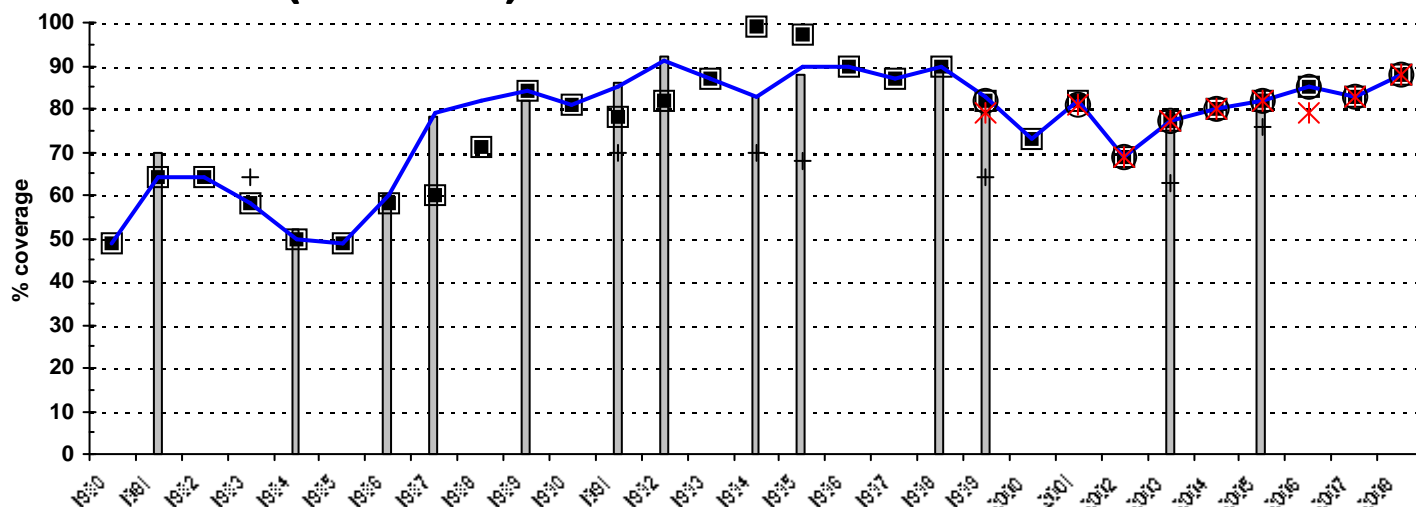
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Malawi

## MCV (1980-2008)



### Description of trend

Survey data available for almost every two years since 1986 consistently show high coverage levels. Since 1999 estimates are based on reported data supported by survey results.

### Data presented in chart

Year	WHO/ UNICEF estimate (%)	Reported to:*		Government official estimate (%)	Reported doses administered (%)**	Survey data (%)***	
		WHO (%)	UNICEF (%)			Survey 12-23 months	Survey <12 months
1980	49	49	49				
1981	64	64	64			70	
1982	64	64	64				
1983	58	58	58				64
1984	50	50	50			52	
1985	49	49	49				
1986	60	58	58			60	
1987	79	60	60			78	
1988	82	71	71				
1989	84	84	84			82	
1990	81	81	81				
1991	85	78	78			86	70
1992	91	82	82			92	
1993	87	87	87				
1994	83	99	99			83	70
1995	90	97	97			88	68
1996	90	90	90				
1997	87	87	87				
1998	90	90	90			90	
1999	83	82	82	82	79	83	64
2000	73	73	73				
2001	82	82	82	81	81		
2002	69	69	69	69	69		
2003	77	77	77	77	77	79	63
2004	80	80	80	80	80		
2005	82	82	82	82	82	84	76
2006	85	85	85	85	79		
2007	83	83	83	83	83		
2008	88	88	88	88	88		

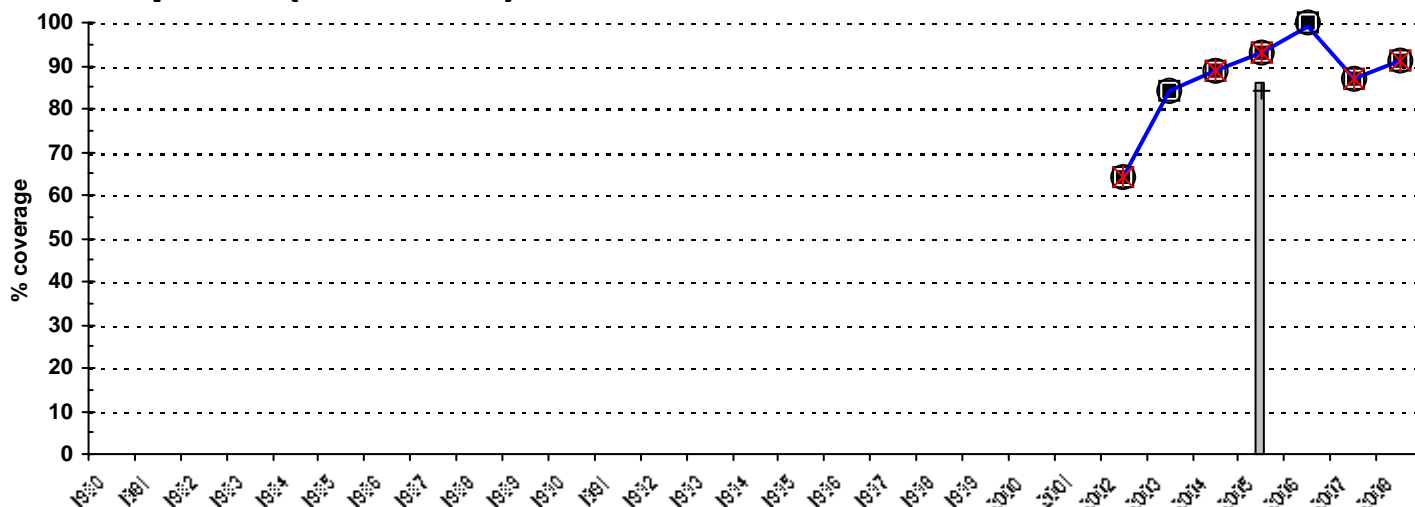
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Malawi

## HepB3 (1980-2008)



### Description of trend

DTP-HepB-Hib vaccine introduced in 2002. Estimates are based on reported data supported by survey results.

### Data presented in chart

Year	WHO/ UNICEF estimate (%)	Reported to:*		Government official estimate (%)	Reported doses administered (%)**	Survey data (%)***	
		WHO (%)	UNICEF (%)			Survey 12-23 months	Survey <12 months
1980							
1981							
1982							
1983							
1984							
1985							
1986							
1987							
1988							
1989							
1990							
1991							
1992							
1993							
1994							
1995							
1996							
1997							
1998							
1999							
2000							
2001							
2002	64	64	64	64	64		
2003	84	84	84	84			
2004	89	89	89	89	89		
2005	93	93	93	93	93	86	84
2006	99	100	100	100			
2007	87	87	87	87	87		
2008	91	91	91	91	91		

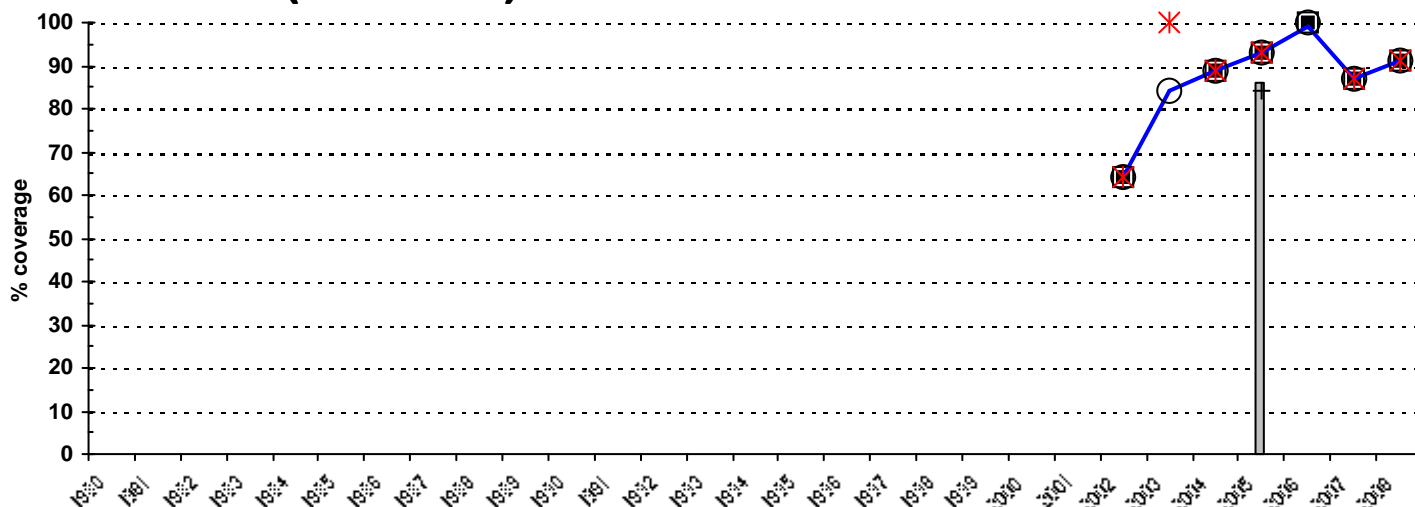
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Malawi

## Hib3 (1980-2008)



### Description of trend

DTP-HepB-Hib vaccine introduced in 2002. Estimates are based on reported data.

### Data presented in chart

Year	WHO/ UNICEF estimate (%)	Reported to:*		Government official estimate (%)	Reported doses administered (%)**	Survey data (%)***	
		WHO (%)	UNICEF (%)			Survey 12-23 months	Survey <12 months
1980							
1981							
1982							
1983							
1984							
1985							
1986							
1987							
1988							
1989							
1990							
1991							
1992							
1993							
1994							
1995							
1996							
1997							
1998							
1999							
2000							
2001							
2002	64	64	64	64	64		
2003	84			84	100		
2004	89	89	89	89	89		
2005	93	93	93	93	93	86	84
2006	99	100	100	100			
2007	87	87	87	87	87		
2008	91	91	91	91	91		

\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Malawi

## Details Survey Data

### Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
<b>2005 Malawi Multiple Indicator Cluster Survey 2006</b>								
BCG	Card or History	95.7		12-23 m	5080	76.8	2006	
BCG	C or H <12 month	95.2		12-23 m	5080	76.8	2006	
DTP1	Card or History	96.2		12-23 m	5080	76.8	2006	
DTP1	C or H <12 month	95.3		12-23 m	5080	76.8	2006	
DTP3	Card or History	86.4		12-23 m	5080	76.8	2006	
DTP3	C or H <12 month	84.4		12-23 m	5080	76.8	2006	
Pol3	Card or History	81.3		12-23 m	5080	76.8	2006	
Pol3	C or H <12 month	79.1		12-23 m	5080	76.8	2006	
MCV	Card or History	84.4		12-23 m	5080	76.8	2006	
MCV	C or H <12 month	75.9		12-23 m	5080	76.8	2006	
HepB	Card or History	86.4		12-23 m	5080	76.8	2006	
HepB	C or H <12 month	84.4		12-23 m	5080	76.8	2006	
Hib3	Card or History	86.4		12-23 m	5080	76.8	2006	
Hib3	C or H <12 month	84.4		12-23 m	5080	76.8	2006	
PAB	Card or History	84.4		CBAW	384		2006	
<b>2003 Malawi Demographic and Health Survey 2004</b>								
BCG	Card or History	91.4		12-23 m	2194	74.3	2004/2005	
BCG	C or H <12 month	89.7		12-23 m	2194	74.3	2004/2005	
DTP1	Card or History	95		12-23 m	2194	74.3	2004/2005	
DTP1	C or H <12 month	94		12-23 m	2194	74.3	2004/2005	
DTP3	Card or History	81.5		12-23 m	2194	74.3	2004/2005	
DTP3	C or H <12 month	76.1		12-23 m	2194	74.3	2004/2005	
Pol3	Card or History	77.7		12-23 m	2194	74.3	2004/2005	
Pol3	C or H <12 month	73.2		12-23 m	2194	74.3	2004/2005	
MCV	Card or History	78.7		12-23 m	2194	74.3	2004/2005	
MCV	C or H <12 month	62.7		12-23 m	2194	74.3	2004/2005	
<b>1999 Malawi Demographic and Health Survey 2000, 2001</b>								
BCG	Card or History	91.4		12-23 m	2238	81.1	2000	
BCG	C or H <12 month	89.7		12-23 m	2238	81.1	2000	
DTP1	Card or History	95.9		12-23 m	2238	81.1	2000	
DTP1	C or H <12 month	93.8		12-23 m	2238	81.1	2000	
DTP3	Card or History	84.2		12-23 m	2238	81.1	2000	
DTP3	C or H <12 month	78.6		12-23 m	2238	81.1	2000	
Pol3	Card or History	79.8		12-23 m	2238	81.1	2000	
Pol3	C or H <12 month	72.7		12-23 m	2238	81.1	2000	
MCV	Card or History	83.2		12-23 m	2238	81.1	2000	
MCV	C or H <12 month	64.2		12-23 m	2238	81.1	2000	
<b>1998 National EPI Comprehensive Review Report, 1999</b>								
BCG	Card or History	92.4		11-23 m	210	93	1999	
DTP1	Card or History	97		11-23 m	210	93	1999	
DTP3	Card or History	94		11-23 m	210	93	1999	
Pol3	Card or History	93		11-23 m	210	93	1999	
MCV	Card or History	90		11-23 m	210	93	1999	
<b>1995 Malawi Knowledge, Attitudes and Practices in Health Survey 1996, 1997</b>								
BCG	Card or History	97.9		12-23 m	425		1996	
BCG	C or H <12 month	97.2		12-23 m	425		1996	

# Malawi

## Details Survey Data

### Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
DTP1	Card or History	97.5		12-23 m	425		1996	
DTP1	C or H <12 month	96.7		12-23 m	425		1996	
DTP3	Card or History	91.4		12-23 m	425		1996	
DTP3	C or H <12 month	81.2		12-23 m	425		1996	
Pol3	Card or History	89.1		12-23 m	425		1996	
Pol3	C or H <12 month	82.8		12-23 m	425		1996	
MCV	Card or History	88.3		12-23 m	425		1996	
MCV	C or H <12 month	67.9		12-23 m	425		1996	

### 1994 Malawi Social Indicators Survey 1995, 1996

BCG	Card or History	94		12-23 m	997	88	1995	
BCG	C or H <12 month	91		12-23 m	975	88	1995	
DTP1	Card or History	93		12-23 m	997	88	1995	
DTP1	C or H <12 month	92		12-23 m	975	88	1995	
DTP3	Card or History	82		12-23 m	997	88	1995	
DTP3	C or H <12 month	76		12-23 m	975	88	1995	
Pol3	Card or History	84		12-23 m	997	88	1995	
Pol3	C or H <12 month	80		12-23 m	975	88	1995	
MCV	Card or History	83		12-23 m	997	88	1995	
MCV	C or H <12 month	70		12-23 m	975	88	1995	

### 1992 National EPI Comprehensive Review-Report MOH/UNICEF/WHO 1993

BCG	Card or History	96		12-23 m			1993	
DTP1	Card or History			12-23 m			1993	
DTP3	Card or History	92		12-23 m			1993	
Pol3	Card or History	92		12-23 m			1993	
MCV	Card or History	92		12-23 m			1993	

### 1991 Malawi Demographic and Health Survey 1992, 1994

BCG	Card or History	97		12-23 m	772	86.3	1992	
BCG	C or H <12 month	94.7		12-23 m	772	86.3	1992	
BCG	C or H <12 month	92.3		24-35 m	679	71.3	1992	
BCG	C or H <12 month	87.2		36-47 m	667	56.5	1992	
BCG	C or H <12 month	84.7		48-59 m	701	44.8	1992	
DTP1	Card or History	96.9		12-23 m	772	86.3	1992	
DTP1	C or H <12 month	94.8		12-23 m	772	86.3	1992	
DTP1	C or H <12 month	91.8		24-35 m	679	71.3	1992	
DTP1	C or H <12 month	85.9		36-47 m	667	56.5	1992	
DTP1	C or H <12 month	82.8		48-59 m	701	44.8	1992	
DTP3	Card or History	88.6		12-23 m	772	86.3	1992	
DTP3	C or H <12 month	83.6		12-23 m	772	86.3	1992	
DTP3	C or H <12 month	81.3		24-35 m	679	71.3	1992	
DTP3	C or H <12 month	70.9		36-47 m	667	56.5	1992	
DTP3	C or H <12 month	68.7		48-59 m	701	44.8	1992	
Pol3	Card or History	88.1		12-23 m	772	86.3	1992	
Pol3	C or H <12 month	83.7		12-23 m	772	86.3	1992	
Pol3	C or H <12 month	79.8		24-35 m	679	71.3	1992	
Pol3	C or H <12 month	70.7		36-47 m	667	56.5	1992	
Pol3	C or H <12 month	65.6		48-59 m	701	44.8	1992	
MCV	Card or History	85.8		12-23 m	772	86.3	1992	
MCV	C or H <12 month	70.1		12-23 m	772	86.3	1992	
MCV	C or H <12 month	65.5		24-35 m	679	71.3	1992	
MCV	C or H <12 month	58		36-47 m	667	56.5	1992	

# Malawi

## Details Survey Data

### Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
MCV	C or H <12 month	60.3		48-59 m	701	44.8	1992	

### 1989 Malawi 1990 Immunization Coverage Survey

BCG	Card or History	100		12-23 m	210	96	1990	
DTP1	Card or History	100		12-23 m	210	96	1990	
DTP3	Card or History	89		12-23 m	210	96	1990	
Pol3	Card or History	87		12-23 m	210	96	1990	
MCV	Card or History	82		12-23 m	210	96	1990	

### 1987 National Evaluation of The Expanded Programme on Immunization Report, 1988

BCG	Card or History	90		12-23 m	632	90	1988	weighted
DTP1	Card or History	96		12-23 m	632	90	1988	weighted
DTP3	Card or History	82		12-23 m	632	90	1988	weighted
Pol3	Card or History	80		12-23 m	632	90	1988	weighted
MCV	Card or History	78		12-23 m	632	90	1988	weighted

### 1986 National Evaluation of The Expanded Programme on Immunization Report, 1988

BCG	Card or History	86		12-23 m			1987	
DTP3	Card or History	57		12-23 m			1987	
Pol3	Card or History	53		12-23 m			1987	
MCV	Card or History	60		12-23 m			1987	

### 1984 National CCCD Programme- Annual Report 1985 + Evaluation of National Immunization Coverage, Malawi - August 1985

DTP1	Card or History	83	Valid	12-23 m	629	75	1985	
DTP3	Card or History	58	Valid	12-23 m	629	75	1985	
Pol3	Card or History	56	Valid	12-23 m	629	75	1985	
MCV	Card or History	52	Valid	12-23 m	629	75	1985	

### 1983 Evaluation of National Immunization Coverage, Malawi - August 1985

BCG	C or H <12 month	72		12-24 m		70	1984	
DTP1	C or H <12 month	84		12-24 m		70	1984	
DTP3	C or H <12 month	66		12-24 m		70	1984	
Pol3	C or H <12 month	68		12-24 m		70	1984	
MCV	C or H <12 month	64		12-24 m		70	1984	

### 1981 Evaluation of National Immunization Coverage, Malawi - August 1985

DTP1	Card or History	88		12-23 m		86	1982	
DTP3	Card or History	69		12-23 m		86	1982	
Pol3	Card or History	72		12-23 m		86	1982	
MCV	Card or History	70		12-23 m		86	1982	

## 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.

---

<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.

## Malawi

Year	PAB coverage estimate (%)
1980	
1981	
1982	
1983	1
1984	28
1985	26
1986	50
1987	50
1988	69
1989	77
1990	81
1991	83
1992	79
1993	82
1994	85
1995	87
1996	80
1997	87
1998	89
1999	84
2000	84
2001	87
2002	85
2003	87
2004	86
2005	86
2006	88
2007	86
2008	87