

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

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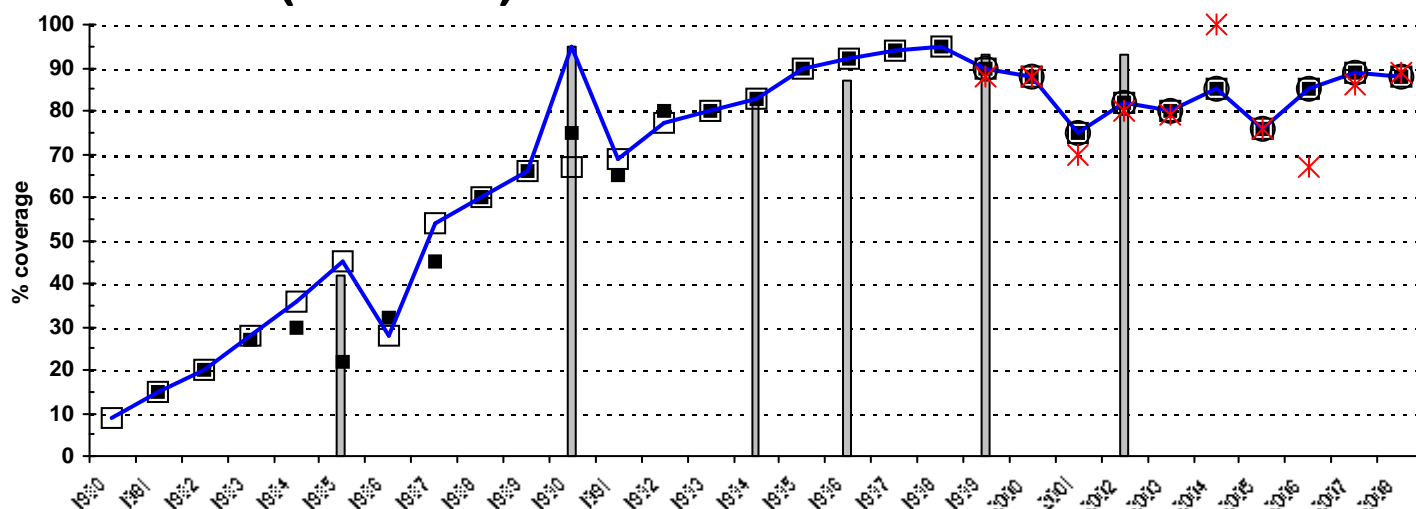
***Myanmar***

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**July, 2009**

# Myanmar

## BCG (1980-2008)



### Description of trend

Estimated immunization coverage levels 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	9	9					
1981	15	15	15				
1982	20	20	20				
1983	28	28	27				
1984	36	36	30				
1985	45	45	22			42	
1986	28	28	32				
1987	54	54	45				
1988	60	60	60				
1989	66	66	66				
1990	95	67	75			95	
1991	69	69	65				
1992	77	77	80				
1993	80	80	80				
1994	83	83	83			83	
1995	90	90	90				
1996	92	92	92			87	
1997	94	94	94				
1998	95	95	95				
1999	90	90	90	90	88	93	
2000	88	88	88	88	88		
2001	75	75	75	75	70		
2002	82	82	82	82	80	93	
2003	80	80	80	80	79		
2004	85	85	85	85	100		
2005	76	76	76	76	76		
2006	85	85	85	85	67		
2007	89	89	89	89	86		
2008	88	88	88	88	89		

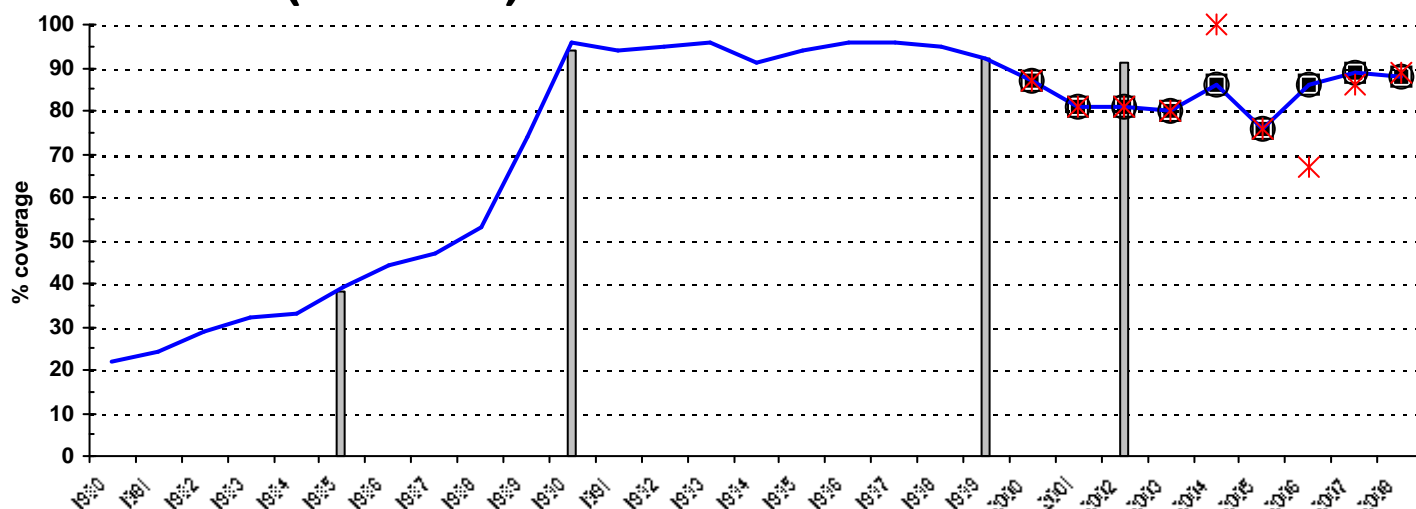
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*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.

# Myanmar

## 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. DTP1 estimates from 2000 onward are based on these reports, supported by survey. For years prior to 2000 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.

### 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	22						
1981	24						
1982	29						
1983	32						
1984	33						
1985	39					38	
1986	44						
1987	47						
1988	53						
1989	74						
1990	96					94	
1991	94						
1992	95						
1993	96						
1994	91						
1995	94						
1996	96						
1997	96						
1998	95						
1999	92					92	
2000	87	87	87	87	87		
2001	81	81	81	81	81		
2002	81	81	81	81	81	91	
2003	80	80	80	80	80		
2004	86	86	86	86	100		
2005	76	76	76	76	76		
2006	86	86	86	86	67		
2007	89	89	89	89	86		
2008	88	88	88	88	89		

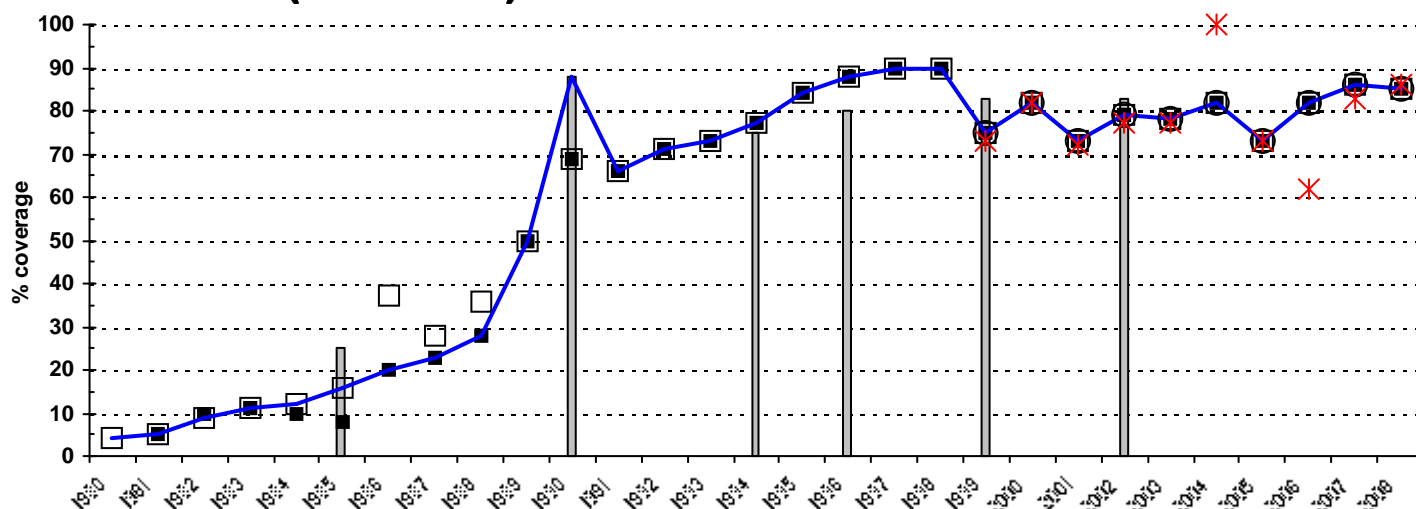
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*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.

# Myanmar

## DTP3 (1980-2008)



### Description of trend

Estimated immunization coverage levels 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	4	4	5				
1981	5	5	10				
1982	9	9	11				
1983	11	12	10				
1984	12	16	8			25	
1985	16	20	20				
1986	20	37	23				
1987	23	28	23				
1988	28	36	28				
1989	50	50	50				
1990	88	69	69			88	
1991	66	66	66				
1992	71	71	71				
1993	73	73	73				
1994	77	77	77			75	
1995	84	84	84				
1996	88	88	88			80	
1997	90	90	90				
1998	90	90	90				
1999	75	75	75	75	73	83	
2000	82	82	82	82	82		
2001	73	73	73	73	72		
2002	79	79	79	79	77	83	
2003	78	78	78	78	77		
2004	82	82	82	82	100		
2005	73	73	73	73	73		
2006	82	82	82	82	62		
2007	86	86	86	86	83		
2008	85	85	85	85	86		

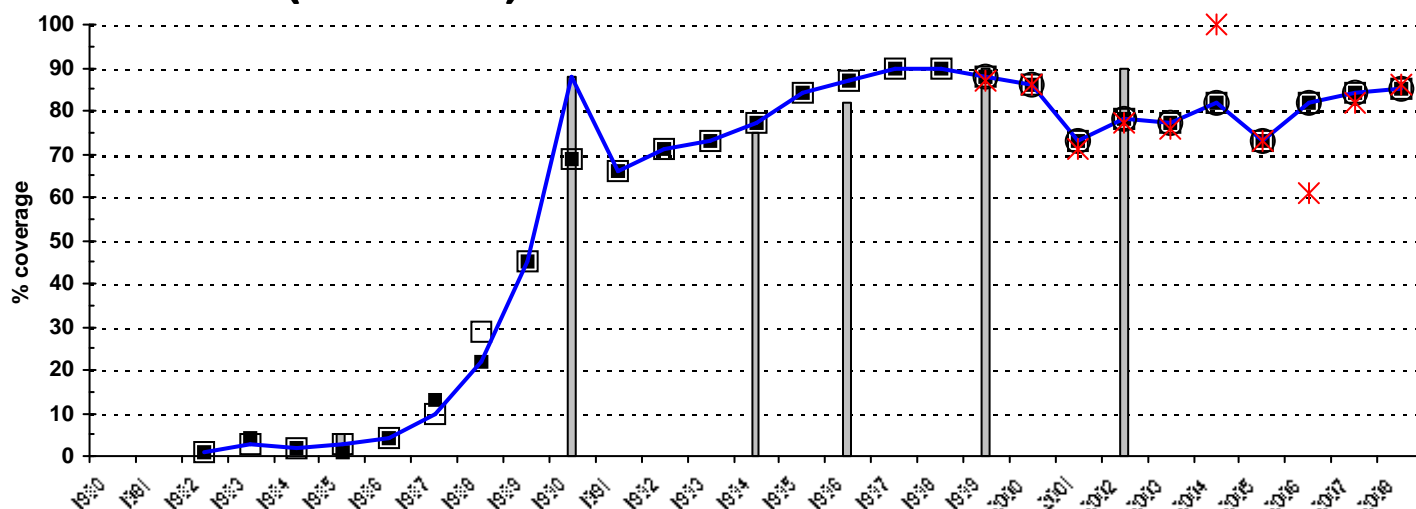
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*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.

# Myanmar

## Pol3 (1980-2008)



### Description of trend

Estimated immunization coverage levels 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	1	1	1				
1983	3	3	4				
1984	2	2	2				
1985	3	3	1			5	
1986	4	4	4				
1987	10	10	13				
1988	22	29	22				
1989	45	45	45				
1990	88	69	69			88	
1991	66	66	66				
1992	71	71	71				
1993	73	73	73				
1994	77	77	77			75	
1995	84	84	84				
1996	87	87	87			82	
1997	90	90	90				
1998	90	90	90				
1999	88	88	88	88	87	90	
2000	86	86	86	86	86		
2001	73	73	73	73	71		
2002	78	78	78	78	77	90	
2003	77	77	77	77	76		
2004	82	82	82	82	100		
2005	73	73	73	73	73		
2006	82	82	82	82	61		
2007	84	84	84	84	82		
2008	85	85	85	85	86		

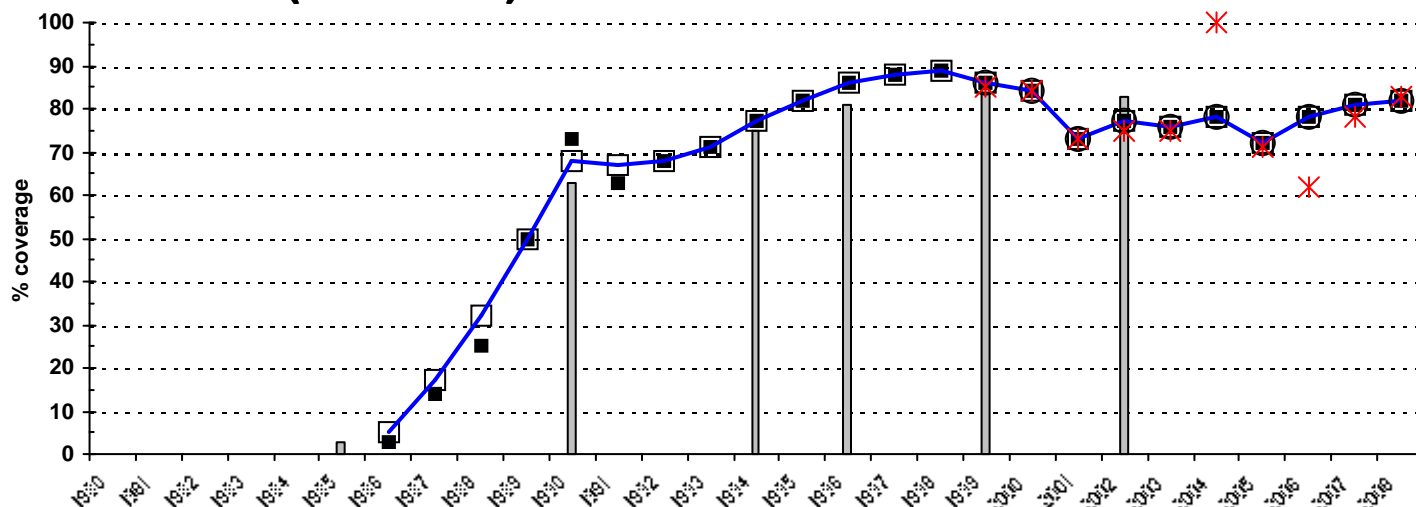
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*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.

# Myanmar

## MCV (1980-2008)



### Description of trend

Estimated immunization coverage levels 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						3	
1986	5	5	3				
1987	17	17	14				
1988	32	32	25				
1989	50	50	50				
1990	68	68	73			63	
1991	67	67	63				
1992	68	68	68				
1993	71	71	71				
1994	77	77	77			75	
1995	82	82	82				
1996	86	86	86			81	
1997	88	88	88				
1998	89	89	89				
1999	86	86	86	86	85	87	
2000	84	84	84	84	84		
2001	73	73	73	73	73		
2002	77	77	77	77	75	83	
2003	76	76	76	76	75		
2004	78	78	78	78	100		
2005	72	72	72	72	71		
2006	78	78	78	78	62		
2007	81	81	81	81	78		
2008	82	82	82	82	83		

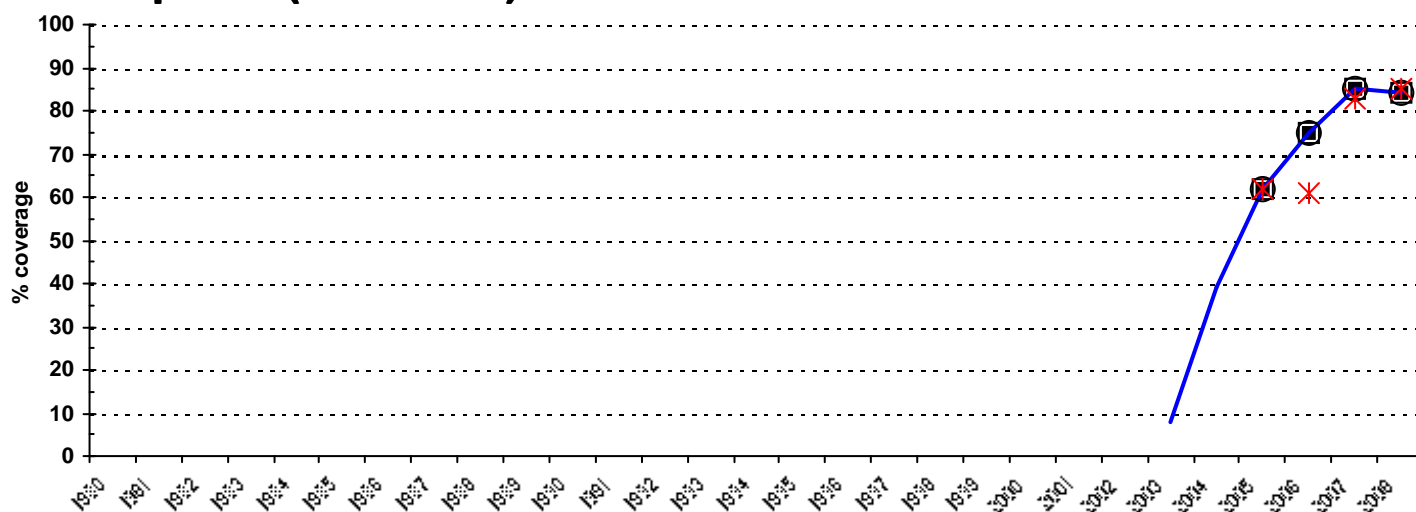
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*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.

# Myanmar

## HepB3 (1980-2008)



### Description of trend

Hepatitis B vaccine introduced in part of the country in 2003 with 34% coverage in 24% of the country. In 2004 54% coverage was achieved 72% of the country. Estimates from 2005 onward are based on nationally 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							
2003	8						
2004	39						
2005	62	62	62	62	62		
2006	75	75	75	75	61		
2007	85	85	85	85	83		
2008	84	84	84	84	85		

\*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.

# Myanmar

## Details Survey Data

### Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
<b>2002 Myanmar Multiple Indicator Cluster Survey (2003)</b>								
BCG	History	52.6		12-23 m	2480	35.3	2003	
BCG	Card or history	92.7		12-23 m	2480	35.3	2003	
BCG	Card <12 months	98.1		12-23 m	2480	35.3	2003	
BCG	Card	40.1		12-23 m	2480	35.3	2003	
DTP1	History	51.3		12-23 m	2480	35.3	2003	
DTP1	Card or history	91.4		12-23 m	2480	35.3	2003	
DTP1	Card <12 months	98.5		12-23 m	2480	35.3	2003	
DTP1	Card	40.1		12-23 m	2480	35.3	2003	
DTP3	History	44.7		12-23 m	2480	35.3	2003	
DTP3	Card or history	83		12-23 m	2480	35.3	2003	
DTP3	Card <12 months	97.1		12-23 m	2480	35.3	2003	
DTP3	Card	38.3		12-23 m	2480	35.3	2003	
Pol3	History	51.8		12-23 m	2480	35.3	2003	
Pol3	Card or history	89.9		12-23 m	2480	35.3	2003	
Pol3	Card <12 months	97.2		12-23 m	2480	35.3	2003	
Pol3	Card	38.1		12-23 m	2480	35.3	2003	
MCV	History	46.1		12-23 m	2480	35.3	2003	
MCV	Card or history	83.1		12-23 m	2480	35.3	2003	
MCV	Card <12 months	94.2		12-23 m	2480	35.3	2003	
MCV	Card	37		12-23 m	2480	35.3	2003	
<b>1999 Myanmar Multiple Indicator Cluster Survey 2000</b>								
BCG	Card or History	93.4		12-23 m	2831	51.6	2000	
DTP1	Card or History	92.4		12-23 m	2831	51.6	2000	
DTP3	Card or History	82.9		12-23 m	2831	51.6	2000	
Pol3	Card or History	89.7		12-23 m	2831	51.6	2000	
MCV	Card or History	87.2		12-23 m	2831	51.6	2000	
<b>1996 Monitoring Progress Towards the Goals of National Programme of Action for Myanmar's Children 1997, 1999</b>								
BCG	Card or History	87		12-23 m			1997	
DTP1	Card or History			12-23 m			1997	
DTP3	Card or History	80.2		12-23 m			1997	
Pol3	Card or History	81.6		12-23 m			1997	
MCV	Card or History	80.6		12-23 m			1997	
<b>1994 Multiple Indicator Cluster Survey 1995, 1996</b>								
BCG	Card or History	83.4		12-23 m			1995	
DTP1	Card or History			12-23 m			1995	
DTP3	Card or History	75		12-23 m			1995	
Pol3	Card or History	75		12-23 m			1995	
MCV	Card or History	74.8		12-23 m			1995	
<b>1990 EPI Coverage Evaluation Survey for Myanmar, 1991</b>								
BCG	Card or History	94.9	crude	12-23 m		92.7	1991	
DTP1	Card or History	94.1	crude	12-23 m		92.7	1991	
DTP3	Card or History	87.6	crude	12-23 m		92.7	1991	
Pol3	Card or History	87.6	crude	12-23 m		92.7	1991	
MCV	Card or History	63.1	crude	12-23 m		92.7	1991	

# Myanmar

## Details Survey Data

### Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
<b>1985 EPI Coverage Evaluation Survey for Myanmar, 1991</b>								
DTP1	Card or History	38		12-23 m			1986	Confirmation method assumed
<b>1985 Joint Government/Unicef/Who Review of the EPI in the Socialist Republic of the Union of Burma, 1987</b>								
BCG	Card or History	42		12-23 m			1986	Confirmation method assumed
DTP3	Card or History	25		12-23 m			1986	Confirmation method assumed
Pol3	Card or History	5		12-23 m			1986	Confirmation method assumed
MCV	Card or History	3		12-23 m			1986	Confirmation method assumed

## Myanmar

### 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.

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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.

## Myanmar

<b>Year</b>	<b>PAB coverage estimate (%)</b>
1980	3
1981	6
1982	12
1983	15
1984	21
1985	24
1986	31
1987	35
1988	37
1989	49
1990	62
1991	80
1992	81
1993	82
1994	76
1995	80
1996	82
1997	84
1998	82
1999	76
2000	79
2001	81
2002	85
2003	86
2004	87
2005	89
2006	92
2007	93
2008	93