

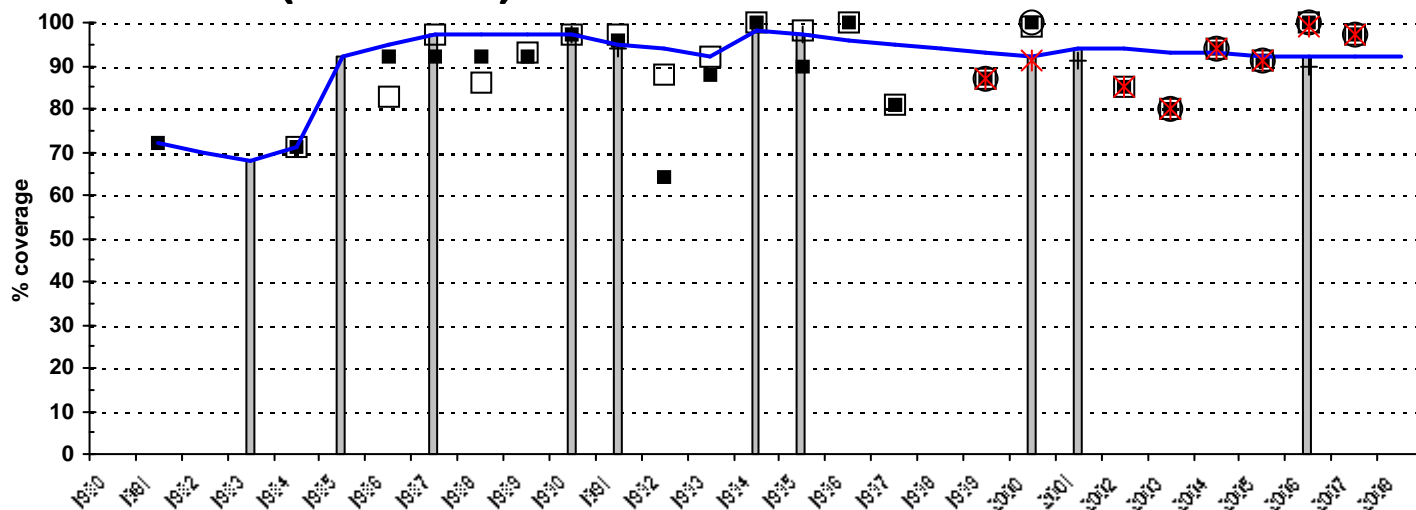
**WHO/UNICEF
Review of National Immunization Coverage
1980-2008**

Zambia

July, 2009

Zambia

BCG (1980-2008)



Description of trend

Estimates are based on survey 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	72		72				
1982	70						
1983	68					68	
1984	71	71	71				
1985	92					92	
1986	95	83	92				
1987	97	97	92			97	
1988	97	86	92				
1989	97	93	92				
1990	97	97	97			97	97
1991	95	97	96			96	94
1992	94	88	64				
1993	92	92	88				
1994	98	100	100			99	
1995	97	98	90			97	97
1996	96	100	100				
1997	95	81	81				
1998	94						
1999	93	87	87	87	87		
2000	92	99	100	100	91	92	
2001	94					94	91
2002	94	85	85		85		
2003	93	80	80	80	80		
2004	93	94	94	94	94		
2005	92	91	91	91	91		
2006	92	100	100	100	99	92	90
2007	92	97	97	97	97		
2008	92	101	101	101	101		

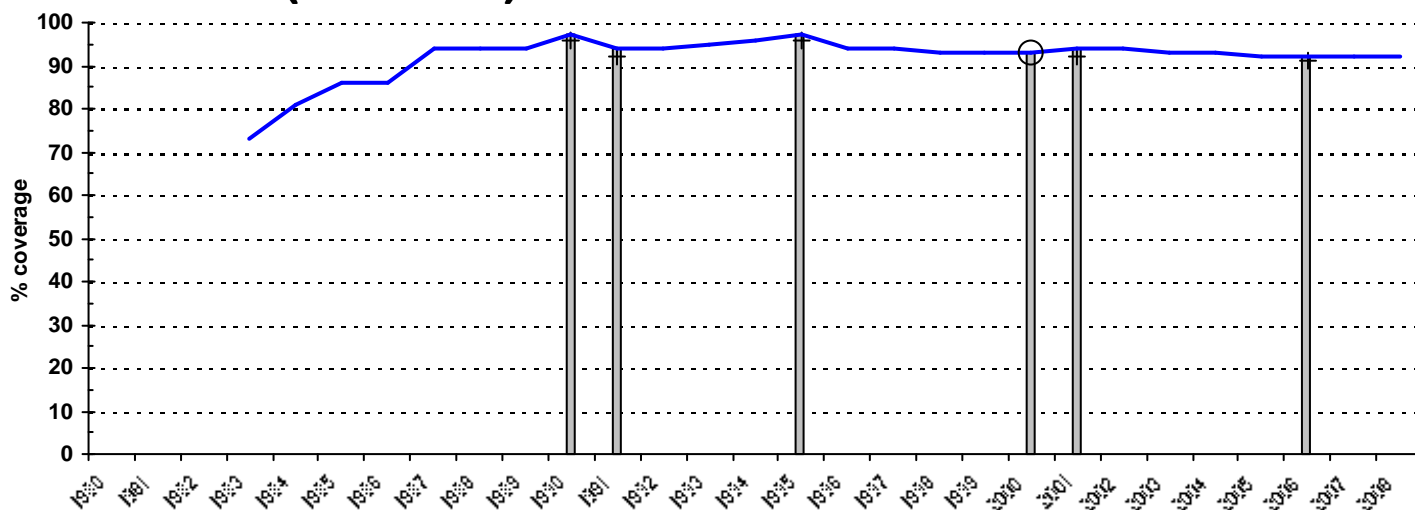
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Zambia

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. From 1983 to 1990 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. From 1991 onward the estimates are based on survey 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	73						
1984	81						
1985	86						
1986	86						
1987	94						
1988	94						
1989	94						
1990	97					97	96
1991	94					94	92
1992	94						
1993	95						
1994	96						
1995	97					97	96
1996	94						
1997	94						
1998	93						
1999	93						
2000	93			93		93	
2001	94					94	92
2002	94						
2003	93						
2004	93						
2005	92						
2006	92					92	91
2007	92						
2008	92						

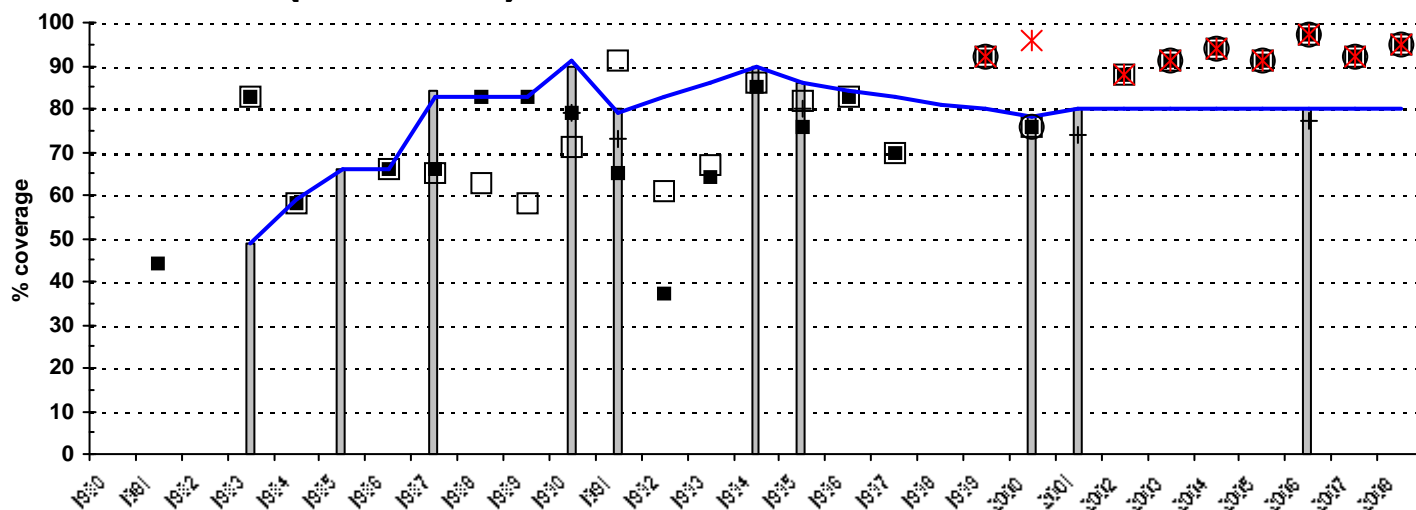
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

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

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Zambia

DTP3 (1980-2008)



Description of trend

Estimates are based on survey 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			44				
1982							
1983	49	83	83			49	
1984	59	58	58				
1985	66					66	
1986	66	66	66				
1987	83	65	66			84	
1988	83	63	83				
1989	83	58	83				
1990	91	71	79			90	79
1991	79	91	65			80	73
1992	83	61	37				
1993	86	67	64				
1994	90	86	85			90	
1995	86	82	76			86	80
1996	84	83	83				
1997	83	70	70				
1998	81						
1999	80	92	92	92	92		
2000	78	76	76	76	96	78	
2001	80					80	74
2002	80	88	88		88		
2003	80	91	91	91	91		
2004	80	94	94	94	94		
2005	80	91	91	91	91		
2006	80	97	97	97	97	80	77
2007	80	92	92	92	92		
2008	80	95	95	95	95		

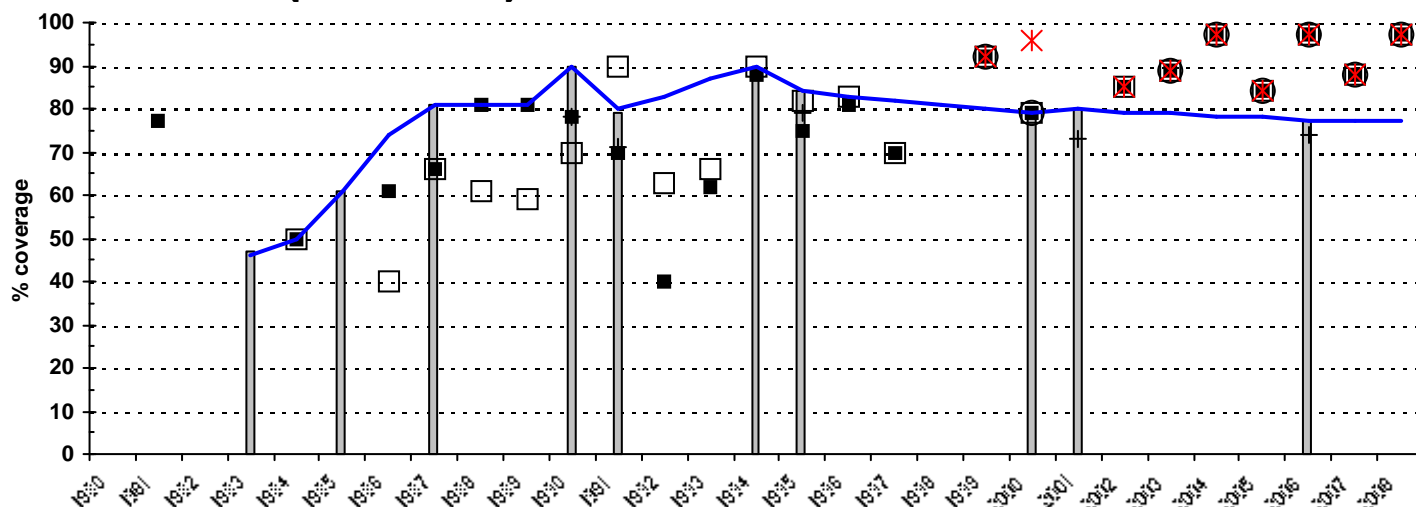
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

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

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Zambia

Pol3 (1980-2008)



Description of trend

Estimates are based on survey 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			77				
1982							
1983	46					47	
1984	50	50	50				
1985	61					61	
1986	74	40	61				
1987	81	66	66			81	
1988	81	61	81				
1989	81	59	81				
1990	90	70	78			90	78
1991	80	90	70			79	71
1992	83	63	40				
1993	87	66	62				
1994	90	90	88			90	
1995	84	82	75			84	79
1996	83	83	81				
1997	82	70	70				
1998	81						
1999	80	92	92	92	92		
2000	79	79	79	79	96	79	
2001	80					80	73
2002	79	85	85		85		
2003	79	89	89	89	89		
2004	78	97	97	97	97		
2005	78	84	84	84	84		
2006	77	97	97	97	97	77	74
2007	77	88	88	88	88		
2008	77	97	97	97	97		

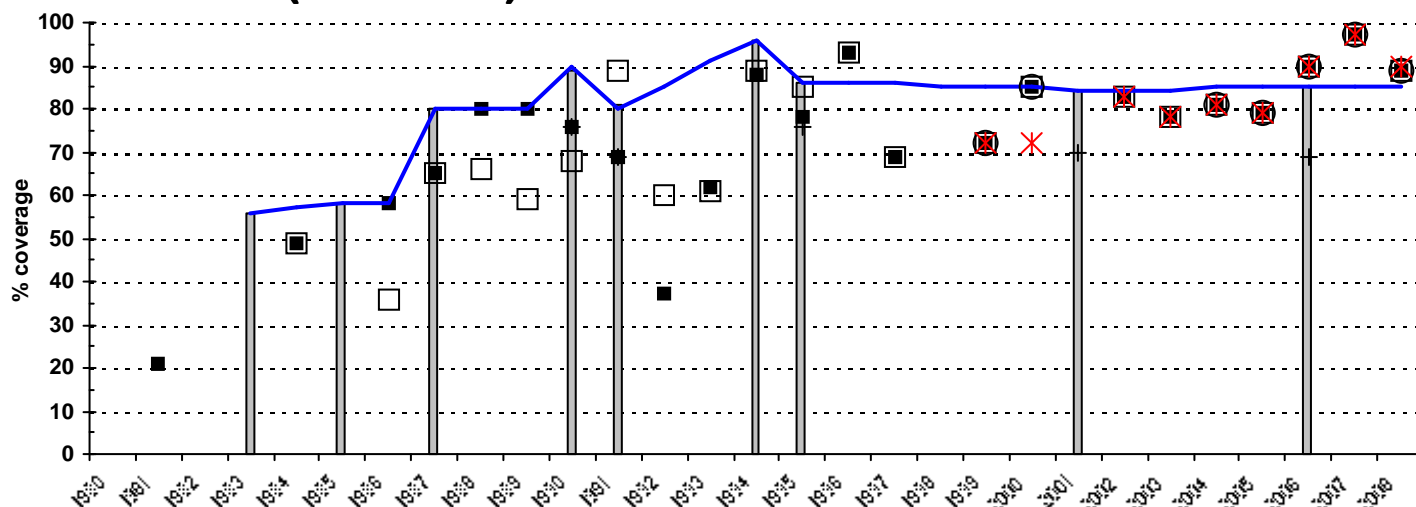
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Zambia

MCV (1980-2008)



Description of trend

Estimates are based on survey 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			21				
1982							
1983	56					56	
1984	57	49	49				
1985	58					58	
1986	58	36	58				
1987	80	65	65			80	
1988	80	66	80				
1989	80	59	80				
1990	90	68	76			89	76
1991	80	89	69			81	69
1992	85	60	37				
1993	91	61	62				
1994	96	89	88			96	
1995	86	85	78			86	76
1996	86	93	93				
1997	86	69	69				
1998	85						
1999	85	72	72	72	72		
2000	85	85	85	85	72		
2001	84					84	70
2002	84	83	83		83		
2003	84	78	78		78		
2004	85	81	81	81	81		
2005	85	79	79	79	79		
2006	85	90	90	90	90	85	69
2007	85	97	97	97	97		
2008	85	89	89	89	90		

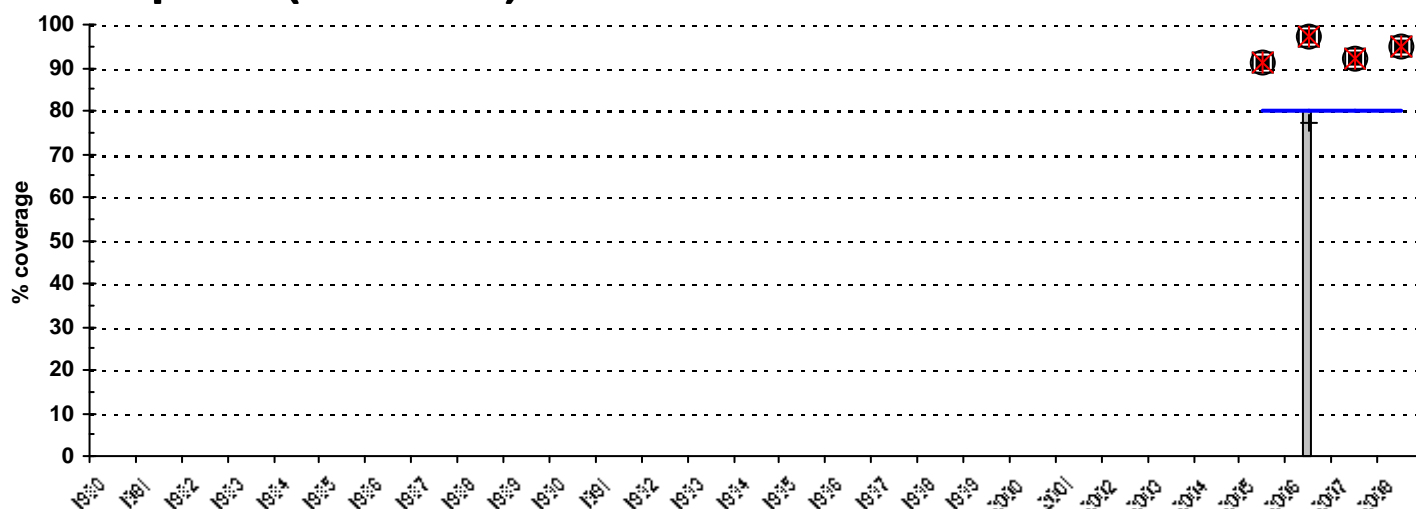
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Zambia

HepB3 (1980-2008)



Description of trend

DTP-HepB-Hib vaccine introduced in 2005. Coverage estimates are based on DTP3 estimates.

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							
2004							
2005	80	91	91	91	91		
2006	80	97	97	97	97	80	77
2007	80	92	92	92	92		
2008	80	95	95	95	95		

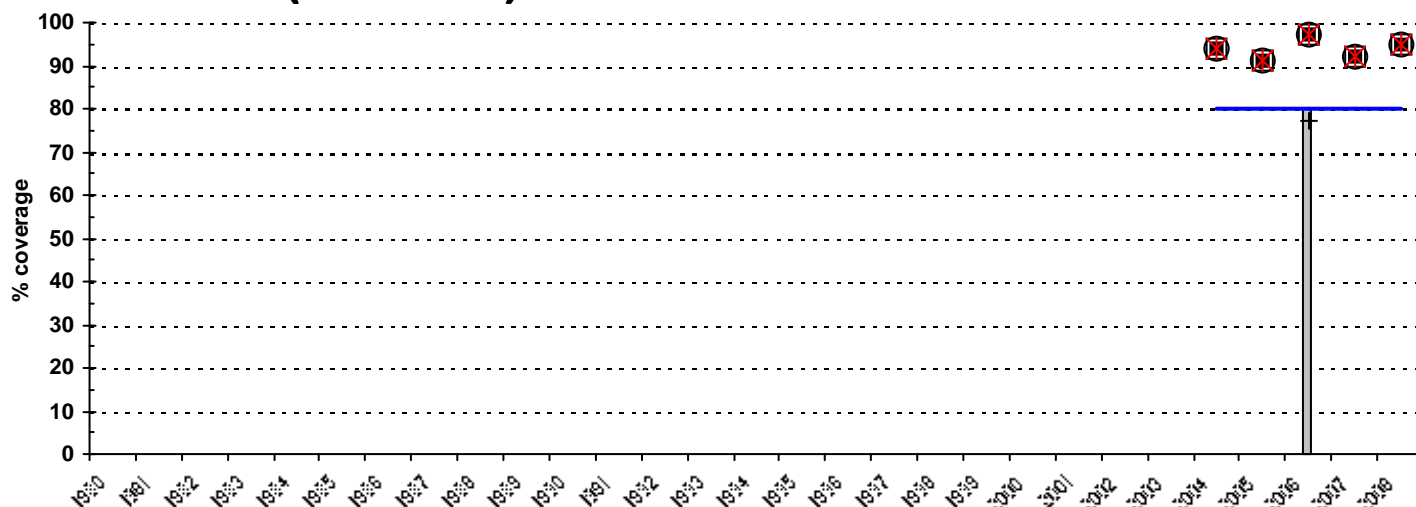
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Zambia

Hib3 (1980-2008)



Description of trend

In 2004, Zambia substituted DTP-Hib combination vaccine for their previous DTP presentation. The estimate for Hib3 coverage are based on estimated DTP3 coverage.

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							
2004	80	94	94	94	94		
2005	80	91	91	91	91		
2006	80	97	97	97	97	80	77
2007	80	92	92	92	92		
2008	80	95	95	95	95		

*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.

Zambia

Details Survey Data

Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
2006 Zambia Demographic and Health Survey 2007								
BCG	Card or History	92.3		12-23 m	1272	77.9	2007	
BCG	C or H <12 month	90.3		12-23 m	1272	77.9	2007	
DTP1	Card or History	92.3		12-23 m	1272	77.9	2007	
DTP1	C or H <12 month	91.4		12-23 m	1272	77.9	2007	
DTP3	Card or History	79.7		12-23 m	1272	77.9	2007	
DTP3	C or H <12 month	77.3		12-23 m	1272	77.9	2007	
Pol3	Card or History	77		12-23 m	1272	77.9	2007	
Pol3	C or H <12 month	74.2		12-23 m	1272	77.9	2007	
MCV	Card or History	84.9		12-23 m	1272	77.9	2007	
MCV	C or H <12 month	68.8		12-23 m	1272	77.9	2007	
HepB	Card or History	79.7		12-23 m	1272	77.9	2007	
HepB	C or H <12 month	77.3		12-23 m	1272	77.9	2007	
Hib3	Card or History	79.7		12-23 m	1272	77.9	2007	
Hib3	C or H <12 month	77.3		12-23 m	1272	77.9	2007	
PAB	n.a.	81.3		CBAW	4136		2007	
2001 Zambia Demographic and Health Survey 2001-2002								
BCG	Card or History	94		12-23 m	1299	79.5	2001/2002	
BCG	C or H <12 month	90.7		12-23 m	1299	79.5	2001/2002	
DTP1	Card or History	94.1		12-23 m	1299	79.5	2001/2002	
DTP1	C or H <12 month	91.9		12-23 m	1299	79.5	2001/2002	
DTP3	Card or History	80		12-23 m	1299	79.5	2001/2002	
DTP3	C or H <12 month	73.8		12-23 m	1299	79.5	2001/2002	
Pol3	Card or History	80.2		12-23 m	1299	79.5	2001/2002	
Pol3	C or H <12 month	73.4		12-23 m	1299	79.5	2001/2002	
MCV	Card or History	84.4		12-23 m	1299	79.5	2001/2002	
MCV	C or H <12 month	70.2		12-23 m	1299	79.5	2001/2002	
2000 Zambia EPI Cluster Survey Report 2001								
BCG	Card or History	92		12-23 m	221	83.3	2001	
DTP1	Card or History	93		12-23 m	221	83.3	2001	
DTP3	Card or History	77.8		12-23 m	221	83.3	2001	
Pol3	Card or History	79		12-23 m	221	83.3	2001	
1995 Zambia Demographic and Health Survey 1996, 1997								
BCG	Card or History	97.4		12-23 m	1347	81.8	1996	
BCG	C or H <12 month	96.7		12-23 m	1347	81.8	1996	
BCG	C or H <12 month	96.2		24-35 m	1239	72	1996	
BCG	C or H <12 month	93.2		36-47 m	1112	64	1996	
BCG	C or H <12 month	93.2		48-59 m	1091	54.7	1996	
DTP1	Card or History	96.7		12-23 m	1347	81.8	1996	
DTP1	C or H <12 month	95.8		12-23 m	1347	81.8	1996	
DTP1	C or H <12 month	94.8		24-35 m	1239	72	1996	
DTP1	C or H <12 month	89.7		36-47 m	1112	64	1996	
DTP1	C or H <12 month	90.6		48-59 m	1091	54.7	1996	
DTP3	Card or History	85.7		12-23 m	1347	81.8	1996	
DTP3	C or H <12 month	80		12-23 m	1347	81.8	1996	
DTP3	C or H <12 month	76.3		24-35 m	1239	72	1996	
DTP3	C or H <12 month	71.8		36-47 m	1112	64	1996	
DTP3	C or H <12 month	73.2		48-59 m	1091	54.7	1996	

Zambia

Details Survey Data

Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
Pol3	Card or History	84.4		12-23 m	1347	81.8	1996	
Pol3	C or H <12 month	78.7		12-23 m	1347	81.8	1996	
Pol3	C or H <12 month	77.5		24-35 m	1239	72	1996	
Pol3	C or H <12 month	70.3		36-47 m	1112	64	1996	
Pol3	C or H <12 month	71.5		48-59 m	1091	54.7	1996	
MCV	Card or History	86.5		12-23 m	1347	81.8	1996	
MCV	C or H <12 month	75.8		12-23 m	1347	81.8	1996	
MCV	C or H <12 month	71.4		24-35 m	1239	72	1996	
MCV	C or H <12 month	69.7		36-47 m	1112	64	1996	
MCV	C or H <12 month	67.8		48-59 m	1091	54.7	1996	

1994 Zambia's Children in 1995: Key results of a survey to monitor progress towards goals for children

BCG	Card or History	99		12-23 m			1995	
DTP1	Card or History			12-23 m			1995	
DTP3	Card or History	90		12-23 m			1995	
Pol3	Card or History	90		12-23 m			1995	
MCV	Card or History	96		12-23 m			1995	

1991 Zambia Demographic and Health Survey 1992, 1993

BCG	Card or History	95.1		12-23 m	1123	75.7	1992	
BCG	C or H <12 month	93.5		12-23 m	1123	75.7	1992	
BCG	C or H <12 month	92.8		24-35 m	1125	59.5	1992	
BCG	C or H <12 month	91.9		36-47 m	921	53.7	1992	
BCG	C or H <12 month	88.9		48-59 m	911	49.7	1992	
DTP1	Card or History	93.8		12-23 m	1123	75.7	1992	
DTP1	C or H <12 month	92.3		12-23 m	1123	75.7	1992	
DTP1	C or H <12 month	90.8		24-35 m	1125	59.5	1992	
DTP1	C or H <12 month	89.2		36-47 m	921	53.7	1992	
DTP1	C or H <12 month	87.9		48-59 m	911	49.7	1992	
DTP3	Card or History	76.8		12-23 m	1123	75.7	1992	
DTP3	C or H <12 month	69.8		12-23 m	1123	75.7	1992	
DTP3	C or H <12 month	73.1		24-35 m	1125	59.5	1992	
DTP3	C or H <12 month	69.4		36-47 m	921	53.7	1992	
DTP3	C or H <12 month	64.2		48-59 m	911	49.7	1992	
Pol3	Card or History	76.4		12-23 m	1123	75.7	1992	
Pol3	C or H <12 month	70.2		12-23 m	1123	75.7	1992	
Pol3	C or H <12 month	70.6		24-35 m	1125	59.5	1992	
Pol3	C or H <12 month	66.3		36-47 m	921	53.7	1992	
Pol3	C or H <12 month	63		48-59 m	911	49.7	1992	
MCV	Card or History	77		12-23 m	1123	75.7	1992	
MCV	C or H <12 month	65.9		12-23 m	1123	75.7	1992	
MCV	C or H <12 month	68.7		24-35 m	1125	59.5	1992	
MCV	C or H <12 month	65.3		36-47 m	921	53.7	1992	
MCV	C or H <12 month	65.2		48-59 m	911	49.7	1992	

1991 Zambia's Children in 1995: Key results of a survey to monitor progress towards goals for children

BCG	Card or History	95.8		12-23 m			1992	Calculated
DTP3	Card or History	79.6		12-23 m			1992	Calculated
Pol3	Card or History	78.9		12-23 m			1992	Calculated
MCV	Card or History	80.7		12-23 m			1992	Calculated

1990 Immunization Coverage Survey, 1991

Zambia

Details Survey Data

Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
BCG	Card or History	96.8	Crude	12-23 m	433	93	1991	
BCG	C or H <12 month	96.8		12-23 m	433	93	1991	
DTP1	Card or History	97	Crude	12-23 m	433	93	1991	
DTP1	C or H <12 month	96.5		12-23 m	433	93	1991	
DTP3	Card or History	90.5	Crude	12-23 m	433	93	1991	
DTP3	C or H <12 month	79.2		12-23 m	433	93	1991	
Pol3	Card or History	89.8	Crude	12-23 m	433	93	1991	
Pol3	C or H <12 month	77.6		12-23 m	433	93	1991	
MCV	Card or History	88.9	Crude	12-23 m	433	93	1991	
MCV	C or H <12 month	75.8		12-23 m	433	93	1991	

1987 Immunization Coverage Survey, 1991

BCG	Card or History	97	Crude	12-23 m	635		1988	
DTP3	Card or History	84	Crude	12-23 m	635		1988	
Pol3	Card or History	81	Crude	12-23 m	635		1988	
MCV	Card or History	80	Crude	12-23 m	635		1988	

1985 Immunization Coverage Survey, 1991

BCG	Card or History	92	Crude	12-23 m			1986	
DTP3	Card or History	66	Crude	12-23 m			1986	
Pol3	Card or History	61	Crude	12-23 m			1986	
MCV	Card or History	58	Crude	12-23 m			1986	

1983 Immunization Coverage Survey, 1991

BCG	Card or History	68	Crude	12-23 m			1984	
DTP3	Card or History	49	Crude	12-23 m			1984	
Pol3	Card or History	47	Crude	12-23 m			1984	
MCV	Card or History	56	Crude	12-23 m			1984	

Zambia

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.

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.

Zambia

Year	PAB coverage estimate (%)
1980	
1981	
1982	
1983	
1984	
1985	
1986	36
1987	42
1988	44
1989	51
1990	62
1991	73
1992	46
1993	60
1994	75
1995	85
1996	87
1997	66
1998	70
1999	74
2000	78
2001	85
2002	87
2003	89
2004	90
2005	91
2006	90
2007	89
2008	90