

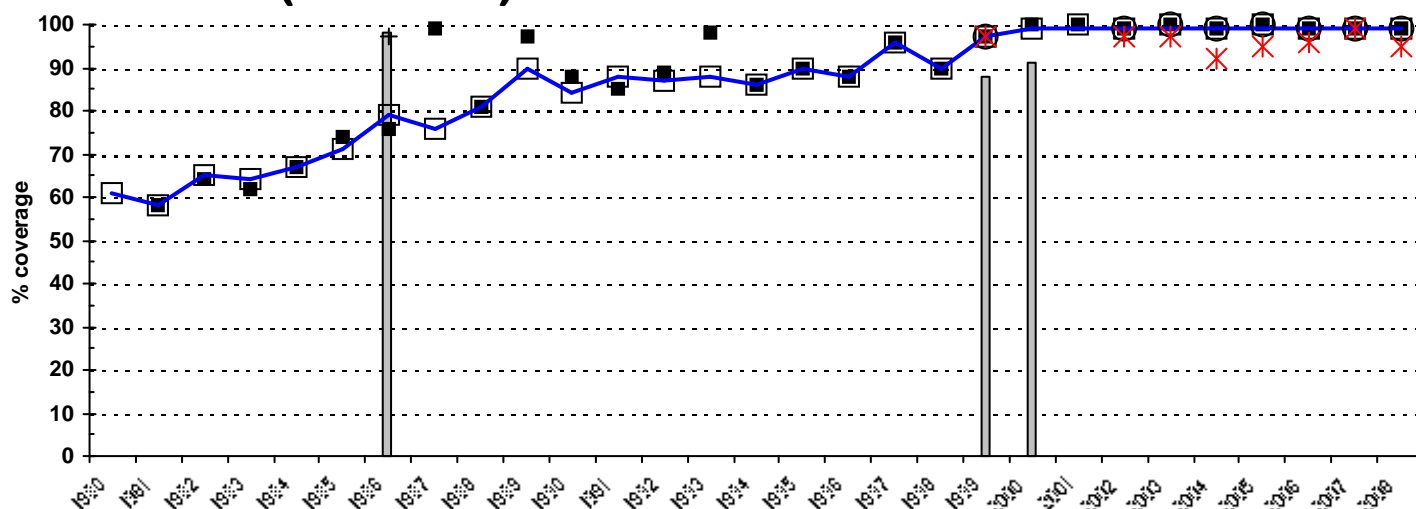
**WHO/UNICEF
Review of National Immunization Coverage
1980-2008**

Sri Lanka

July, 2009

Sri Lanka

BCG (1980-2008)



Description of trend

Officially reported data show a consistently rising trend between 1981 and 1999. Survey data for 1986 (DHS 1987) suggest a much higher rate than reported (over 90%). Officially reported data may underestimate coverage in the late 1980s. The DHS 1993 and DHS 2000 (card only data) support the high reported coverage levels throughout. In light of the interval since last survey data and the differences between survey data and national reports, WHO & UNICEF recommend a high quality survey to confirm continued high 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	61	61					
1981	58	58	58				
1982	65	65	64				
1983	64	64	62				
1984	67	67	67				
1985	71	71	74				
1986	79	79	76			98	97
1987	76	76	99				
1988	81	81	81				
1989	90	90	97				
1990	84	84	88				
1991	88	88	85				
1992	87	87	89				
1993	88	88	98				
1994	86	86	86				
1995	90	90	90				
1996	88	88	88				
1997	96	96	96				
1998	90	90	90				
1999	97	97	97	97	97	88	
2000	99	99	100	101	102	91	
2001	99	100	100	108	108		
2002	99	99	99	99	97		
2003	99	100	100	100	97		
2004	99	99	99	99	92		
2005	99	100	100	100	95		
2006	99	99	99	99	96		
2007	99	99	99	99	99		
2008	99	99	99	99	95		

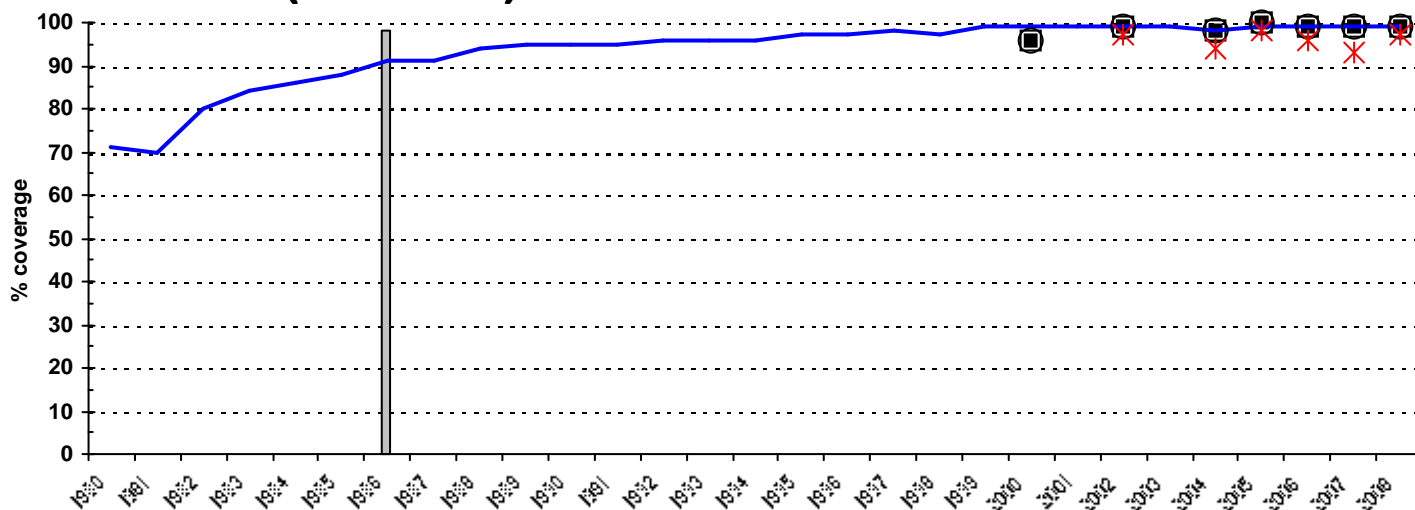
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Sri Lanka

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 for 2000 onward. The estimates are derived from the WHO/UNICEF estimates of DTP3 and the relationship between the levels of DTP3 coverage and 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. In light of the interval since last survey data and the differences between survey data and national reports, WHO & UNICEF recommend a high quality survey to confirm continued high 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	71						
1981	70						
1982	80						
1983	84						
1984	86						
1985	88						
1986	91					98	
1987	91						
1988	94						
1989	95						
1990	95						
1991	95						
1992	96						
1993	96						
1994	96						
1995	97						
1996	97						
1997	98						
1998	97						
1999	99						
2000	99	96	96	96	104		
2001	99	116	116	116	116		
2002	99	99	99	99	97		
2003	99	103	103	103	101		
2004	98	98	98	98	94		
2005	99	100	100	100	98		
2006	99	99	99	99	96		
2007	99	99	99	99	93		
2008	99	99	99	99	97		

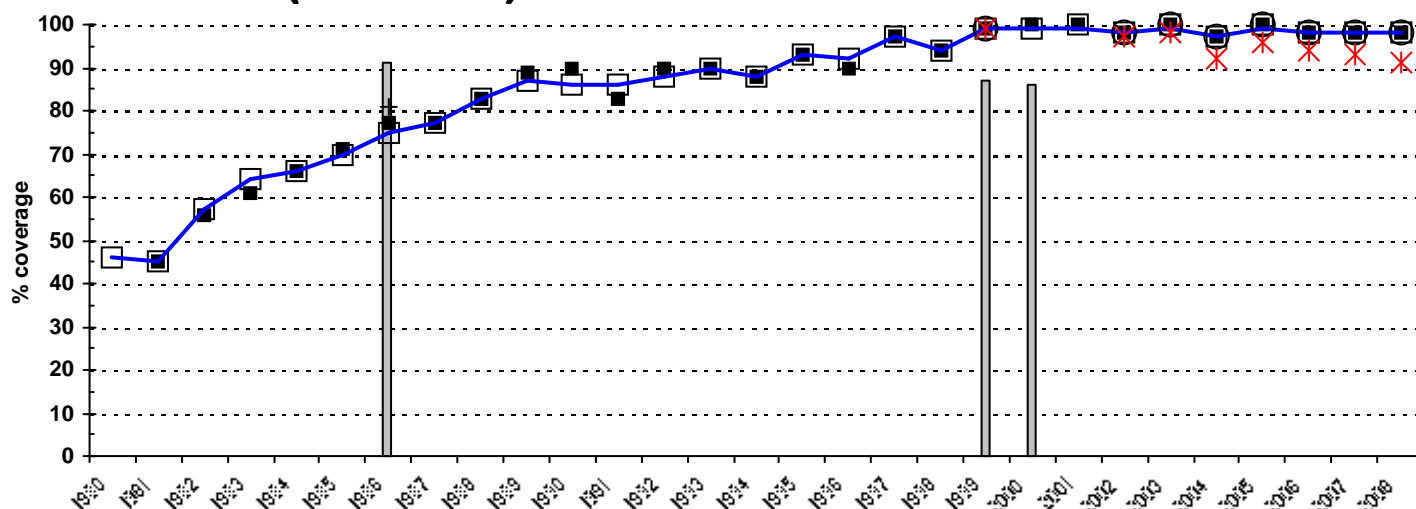
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Sri Lanka

DTP3 (1980-2008)



Description of trend

Officially reported data shows a steadily increasing trend between 1981 and 1999. Survey data for 1986 (DHS 1987) suggest a higher rate than reported (91%). Officially reported data might slightly underestimate coverage in the late 1980s. The DHS 1993 and DHS 2000 (card only data) support the high reported coverage levels throughout. In light of the interval since last survey data and the differences between survey data and national reports, WHO & UNICEF recommend a high quality survey to confirm continued high 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	46	46					
1981	45	45	45				
1982	57	57	56				
1983	64	64	61				
1984	66	66	66				
1985	70	70	71				
1986	75	75	77			91	81
1987	77	77	77				
1988	83	83	83				
1989	87	87	89				
1990	86	86	90				
1991	86	86	83				
1992	88	88	90				
1993	90	90	90				
1994	88	88	88				
1995	93	93	93				
1996	92	92	90				
1997	97	97	97				
1998	94	94	94				
1999	99	99	99	99	99	87	
2000	99	99	100	103	103	86	
2001	99	100	100	113	113		
2002	98	98	98	98	97		
2003	99	100	100	100	98		
2004	97	97	97	97	92		
2005	99	100	100	100	96		
2006	98	98	98	98	94		
2007	98	98	98	98	93		
2008	98	98	98	98	91		

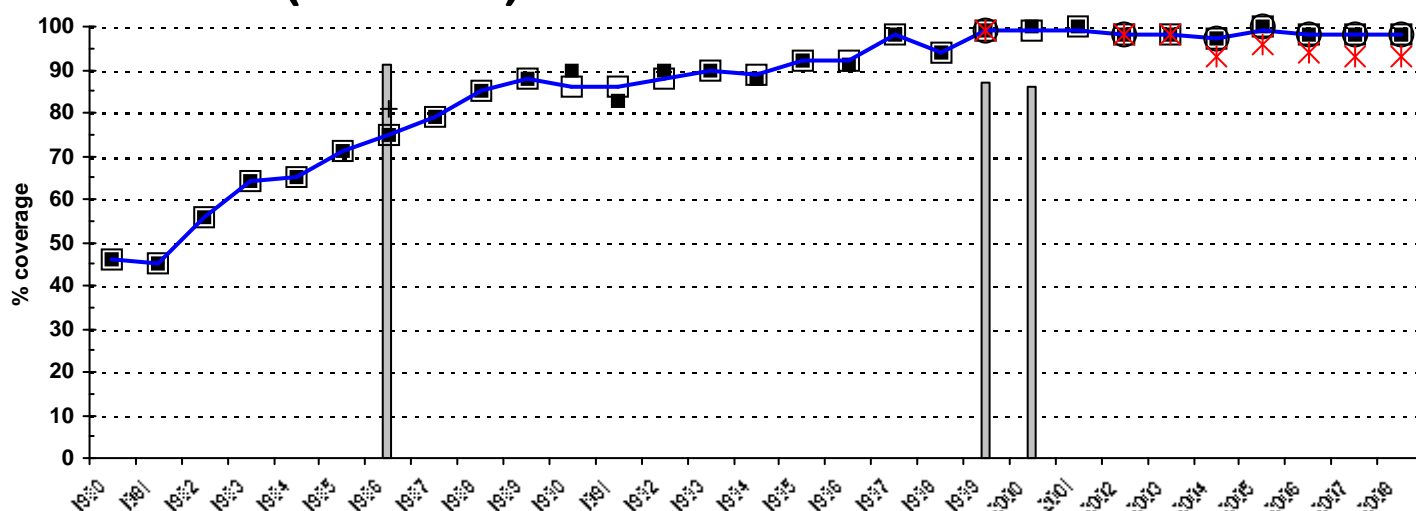
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Sri Lanka

Pol3 (1980-2008)



Description of trend

Officially reported data show a steadily increasing trend between 1981 and 1999. Survey data for 1986 (DHS 1987) suggest a higher rate than reported (91%). Officially reported data might slightly underestimate coverage in the late 1980s. The DHS 1993 and DHS 2000 (card only data support the high reported coverage levels throughout. In light of the interval since last survey data and the differences between survey data at national reports, WHO & UNICEF recommend a high quality survey to confirm continued high 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	46	46	46				
1981	45	45	45				
1982	56	56	56				
1983	64	64	64				
1984	65	65	65				
1985	71	71	71				
1986	75	75	75			91	81
1987	79	79	79				
1988	85	85	85				
1989	88	88	88				
1990	86	86	90				
1991	86	86	83				
1992	88	88	90				
1993	90	90	90				
1994	89	89	88				
1995	92	92	92				
1996	92	92	91				
1997	98	98	98				
1998	94	94	94				
1999	99	99	99	99	99	87	
2000	99	99	100	103	103	86	
2001	99	100	100	113	113		
2002	98	98	98	98	98		
2003	98	98	98		98		
2004	97	97	97	97	93		
2005	99	100	100	100	96		
2006	98	98	98	98	94		
2007	98	98	98	98	93		
2008	98	98	98	98	93		

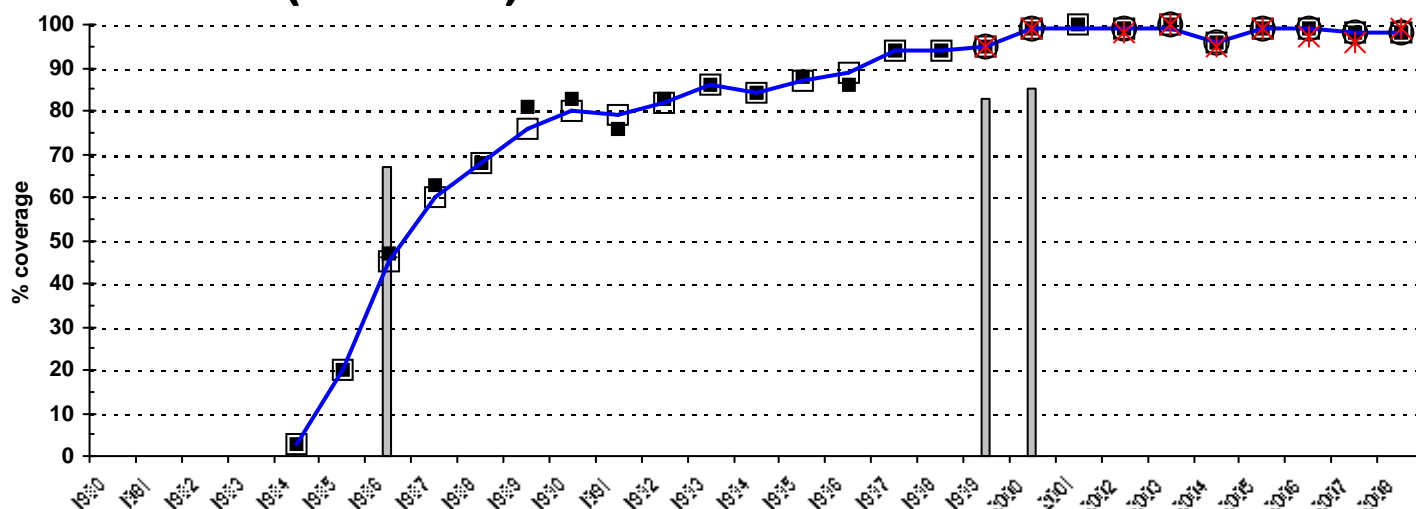
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

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Sri Lanka

MCV (1980-2008)



Description of trend

Officially reported data shows a steep increase in coverage between 1984 and 1999. Survey data for 1986 (DHS 1987) suggest a higher rate than reported (67%). Officially reported data might underestimate actual coverage in the late 1980s. After 1990 coverage continues to rise, the DHS 1993 and DHS 2000 support the high reported coverage levels throughout. In light of the interval since last survey data and the difference between survey data and national reports, WHO & UNICEF recommend a high quality survey to confirm continued high 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	3	3	3				
1985	20	20	20				
1986	45	45	47			67	46
1987	60	60	63				
1988	68	68	68				
1989	76	76	81				
1990	80	80	83				
1991	79	79	76				
1992	82	82	83				
1993	86	86	86				
1994	84	84	84				
1995	87	87	88				
1996	89	89	86				
1997	94	94	94				
1998	94	94	94				
1999	95	95	95	95	95	83	
2000	99	99	99	99	99	85	
2001	99	100	100	104	104		
2002	99	99	99	99	98		
2003	99	100	100	100	100		
2004	96	96	96	96	95		
2005	99	99	99	99	99		
2006	99	99	99	99	97		
2007	98	98	98	98	96		
2008	98	98	98	98	99		

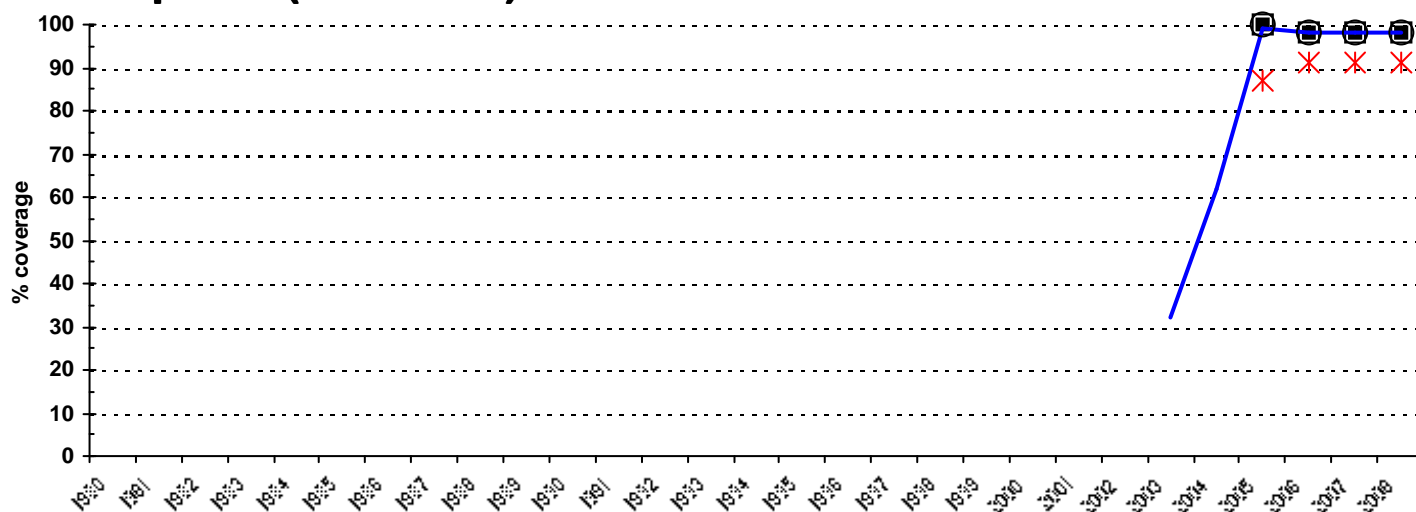
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

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

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Sri Lanka

HepB3 (1980-2008)



Description of trend

Monovalent Hepatitis B vaccine was introduced in 2003 and coverage of 93% was reached in 35% of the country. In 2004 availability expanded to 62% of the country with 79% coverage. In 2005 Hepatitis B vaccine was nationally available. WHO & UNICEF recommend a high quality survey to confirm continued high coverage. Estimates are based on national reports.

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	32						
2004	62						
2005	99	100	100	100	87		
2006	98	98	98	98	91		
2007	98	98	98	98	91		
2008	98	98	98	98	91		

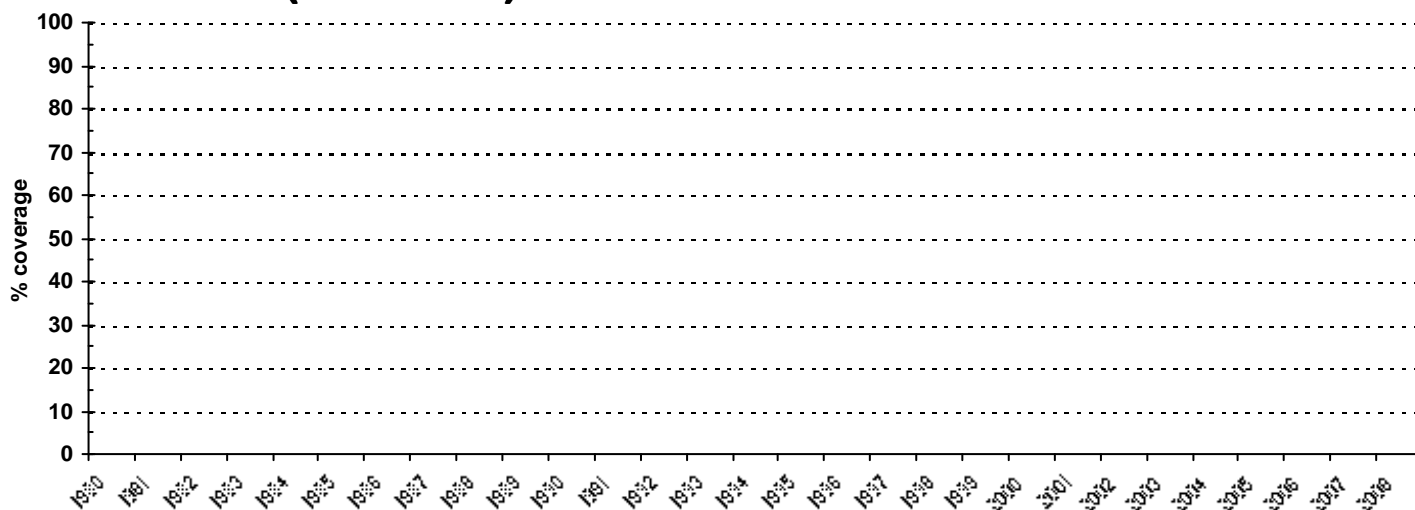
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Sri Lanka

Hib3 (1980-2008)



Description of trend

DTH-HepB-Hib combination vaccine introduced in 2008. Administration of pentavalent vaccine currently temporarily suspended due adverse events following immunization. No pentavalent coverage reported. Immunization with DTP and monovalent HepB continues.

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							
2006							
2007							
2008							

*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.

Sri Lanka

Details Survey Data

Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
2000 Sri Lanka Demographic and Health Survey 2001								
BCG	Card	91.3		12-23 m	172	91.3	2001	Eastern and Northern Provinces
DTP3	Card	86		12-23 m	172	91.3	2001	Eastern and Northern Provinces
Pol3	Card	86		12-23 m	172	91.3	2001	Eastern and Northern Provinces
MCV	Card	84.8		12-23 m	172	91.3	2001	Eastern and Northern Provinces
1999 Sri Lanka Demographic and Health Survey 2000								
BCG	Card	88.4		12-23 m	569	88.6	2000	7 zones, excluding Eastern and Northern Provinces
DTP3	Card	86.8		12-23 m	569	88.6	2000	7 zones, excluding Eastern and Northern Provinces
Pol3	Card	87		12-23 m	569	88.6	2000	7 zones, excluding Eastern and Northern Provinces
MCV	Card	83.4		12-23 m	569	88.6	2000	7 zones, excluding Eastern and Northern Provinces
1986 Demographic and Health Surveys Comparative Studies No. 1, Immunization, Boerma et al., Institute for Resource Development/Macro Systems, 1990								
BCG	Card or History	98		12-23 m	774		1987	
BCG	C or H <12 month	97		12-23 m	774		1987	
DTP1	Card or History	98		12-23 m	774		1987	
DTP1	C or H <12 month			12-23 m	774		1987	
DTP3	Card or History	91		12-23 m	774		1987	
DTP3	C or H <12 month	81		12-23 m	774		1987	
Pol3	Card or History	91		12-23 m	774		1987	
Pol3	C or H <12 month	81		12-23 m	774		1987	
MCV	Card or History	67		12-23 m	774		1987	
MCV	C or H <12 month	46		12-23 m	774		1987	

Sri Lanka

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.

Sri Lanka

Year	PAB coverage estimate (%)
1980	45
1981	48
1982	50
1983	51
1984	53
1985	50
1986	53
1987	59
1988	61
1989	64
1990	72
1991	76
1992	82
1993	82
1994	80
1995	81
1996	85
1997	85
1998	80
1999	86
2000	92
2001	92
2002	89
2003	91
2004	91
2005	87
2006	90
2007	91
2008	93