World Health Organization

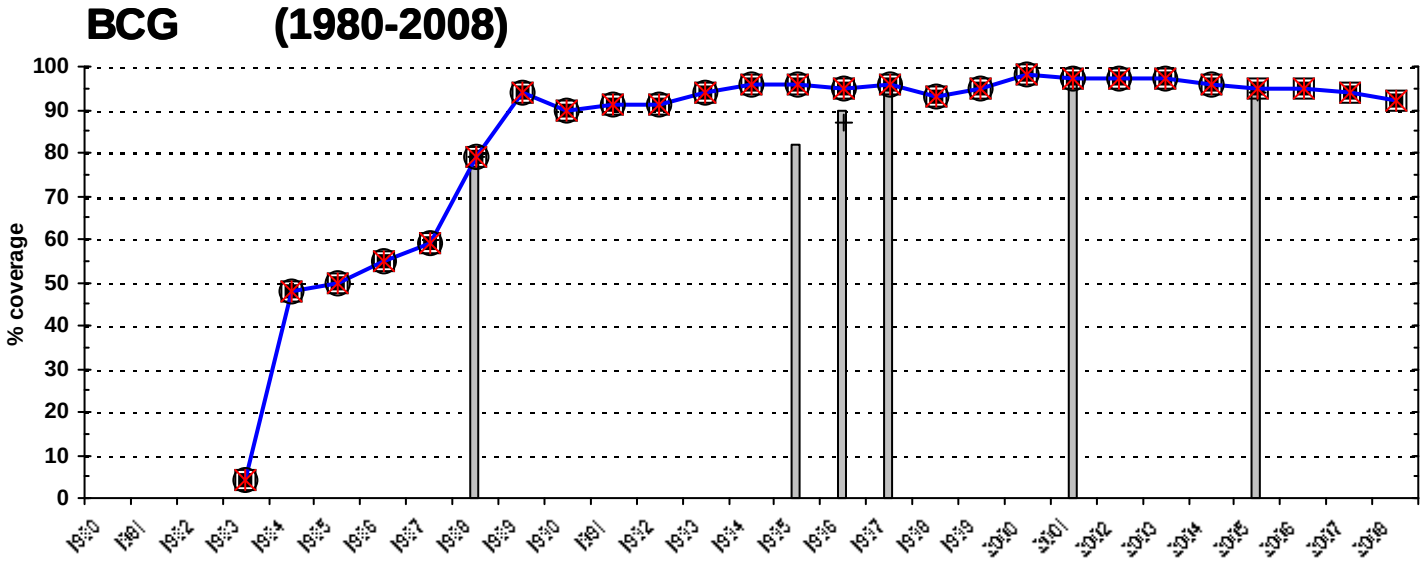
unicef

WHO/UNICEF
Review of National Immunization Coverage
1980-2008

Viet Nam

July, 2009

Viet Nam



Description of trend

Estimated immunization coverage levels are based on reported data, supported by survey results. Survey data for 1995 and 1996 (MICS, DH report slightly lower coverage rates. Card retention, however, is very low in these surveys (13%, DHS). An EPI Cluster Survey in 1998 with c retention of approximately 94% (National Review of the EPI, 1998) confirms reported coverage. The 2006 MICS survey has a card retention of 38.4%, affecting the accuracy of results for higher doses of multiple-dose antigens.

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	4	4	4	4	4		
1984	48	48	48	48	48		
1985	50	50	50	50	50		
1986	55	55	55	55	55		
1987	59	59	59	59	59		
1988	79	79	79	79	79	79	79
1989	94	94	94	94	94		
1990	90	90	90	90	90		
1991	91	91	91	91	91		
1992	91	91	91	91	91		
1993	94	94	94	94	94		
1994	96	96	96	96	96		
1995	96	96	96	96	96	82	
1996	95	95	95	95	95	90	87
1997	96	96	96	96	96	96	
1998	93	93	93	93	93		
1999	95	95	95	95	95		
2000	98	98	98	98	98		
2001	97	97	97	97	97	97	
2002	97	97	97	97	97		
2003	97	97	97	97	97		
2004	96	96	96	96	96		
2005	95	95	95		95	95	94
2006	95	95	95		95		
2007	94	94	94		94		
2008	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.
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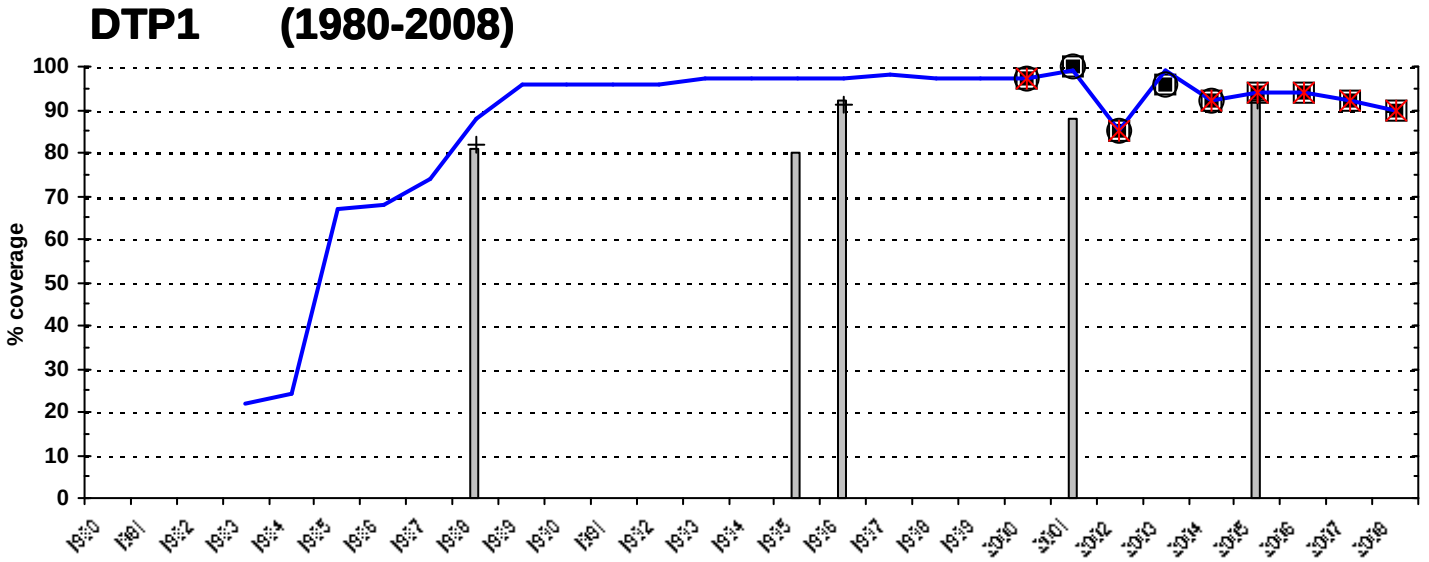
Viet Nam



Description of trend

WHO and UNICEF began requesting data on DTP1 coverage in 2001 and have received national reports reflecting DTP1 coverage from 200 onward. The DTP1 estimates from 2000 onward are based on these reports, except for 2003 where reported DTP1 was lower than reported DTP3. The decline in 2002 reflects vaccine shortage due to frozen vaccine. 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. The 2006 MI survey has card retention rate of 38.4%, affecting the accuracy of results for higher doses of multiple-dose antigens. The 2006 MICS survey a card retention rate of 38.4%, affecting the accuracy of results for higher doses of multiple-dose antigens.

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	22						
1984	24						
1985	67						
1986	68						
1987	74						
1988	88					81	82
1989	96						
1990	96						
1991	96						
1992	96						
1993	97						
1994	97						
1995	97					80	
1996	97					92	91
1997	98						
1998	97						
1999	97						
2000	97	97	97	97	97		
2001	99	100	100	100		88	
2002	85	85	85	85	85		
2003	99	96	96	96			
2004	92	92	92	92	92		
2005	94	94	94		94	94	92
2006	94	94	94		94		
2007	92	92	92		92		
2008	90	90	90		90		

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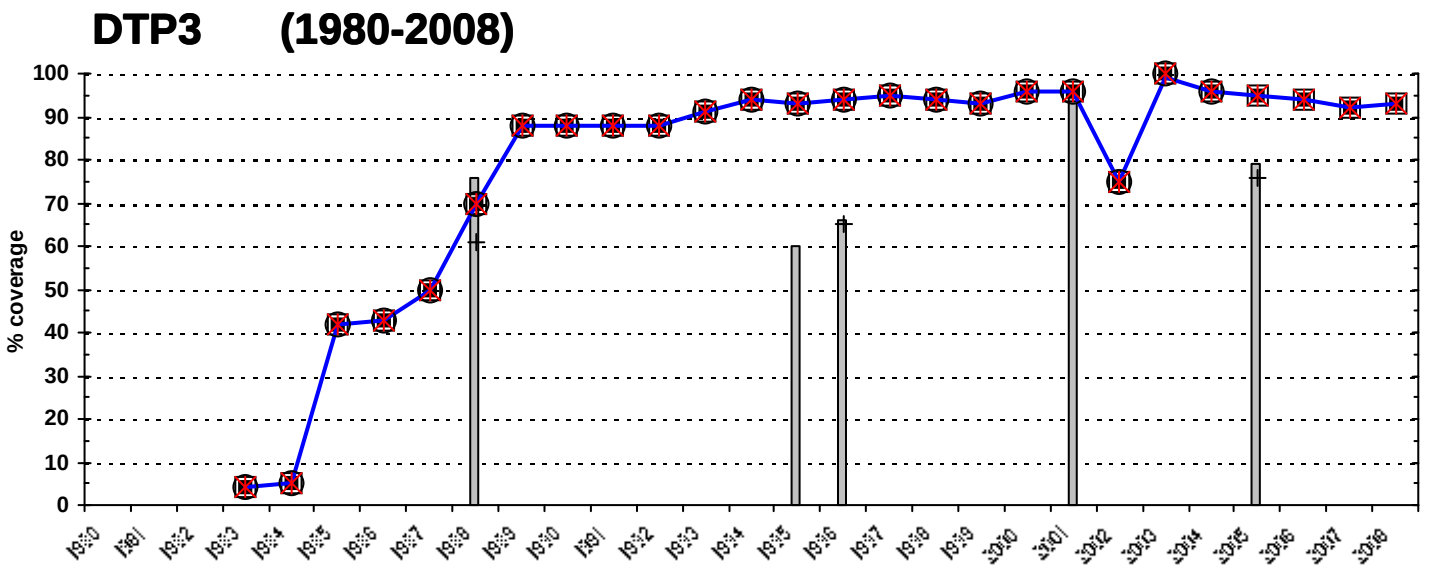

Description of trend

Estimated immunization coverage levels are based on reported data, supported by survey results. Survey data for 1995 and 1996 (MICS, DH report slightly lower coverage rates. Card retention, however, is very low in these surveys (13%, DHS). An EPI Cluster Survey in 1998 with c retention of approximately 94% (National Review of the EPI, 1998) confirms reported coverage. The decline in 2002 reflects vaccine shortage to frozen vaccine. The 2006 MICS survey has a card retention rate of 38.4%, affecting the accuracy of results for higher doses of multiple-do antigens.

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	4	4	4	4	4		
1984	5	5	5	5	5		
1985	42	42	42	42	42		
1986	43	43	43	43	43		
1987	50	50	50	50	50		
1988	70	70	70	70	70	76	61
1989	88	88	88	88	88		
1990	88	88	88	88	88		
1991	88	88	88	88	88		
1992	88	88	88	88	88		
1993	91	91	91	91	91		
1994	94	94	94	94	94		
1995	93	93	93	93	93	60	
1996	94	94	94	94	94	66	65
1997	95	95	95	95	95		
1998	94	94	94	94	94		
1999	93	93	93	93	93		
2000	96	96	96	96	96		
2001	96	96	96	96	96	96	
2002	75	75	75	75	75		
2003	99	100	100	100	100		
2004	96	96	96	96	96		
2005	95	95	95		95	79	76
2006	94	94	94		94		
2007	92	92	92		92		
2008	93	93	93		93		

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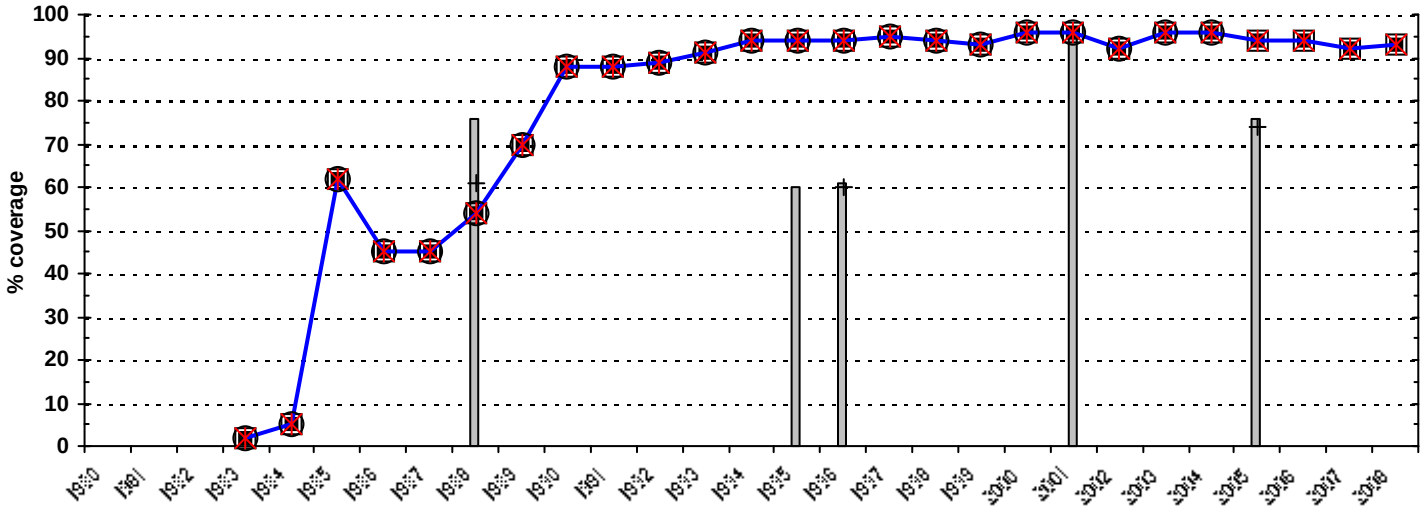
Viet Nam

Pol3 (1980-2008)



Description of trend

Estimated immunization coverage levels are based on reported data, supported by survey results. Survey data for 1995 and 1996 (MICS, DHS report slightly lower coverage rates. Card retention, however, is very low in these surveys (13%, DHS). An EPI Cluster Survey in 1998 with car retention of approximately 94% (National Review of the EPI, 1998) confirms reported coverage. The EPI Cluster Survey in 1998 does not repo polio immunization coverage. The 2006 MICS survey has a card retention rate of 38.4%, affecting the accuracy of results for higher doses of multiple-dose antigens.

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	2	2	2	2	2		
1984	5	5	5	5	5		
1985	62	62	62	62	62		
1986	45	45	45	45	45		
1987	45	45	45	45	45		
1988	54	54	54	54	54	76	61
1989	70	70	70	70	70		
1990	88	88	88	88	88		
1991	88	88	88	88	88		
1992	89	89	89	89	89		
1993	91	91	91	91	91		
1994	94	94	94	94	94		
1995	94	94	94	94	94	60	
1996	94	94	94	94	94	61	60
1997	95	95	95	95	95		
1998	94	94	94	94	94		
1999	93	93	93	93	93		
2000	96	96	96	96	96		
2001	96	96	96	96	96	96	
2002	92	92	92	92	92		
2003	96	96	96	96	96		
2004	96	96	96	96	96		
2005	94	94	94		94	76	74
2006	94	94	94		94		
2007	92	92	92		92		
2008	93	93	93		93		

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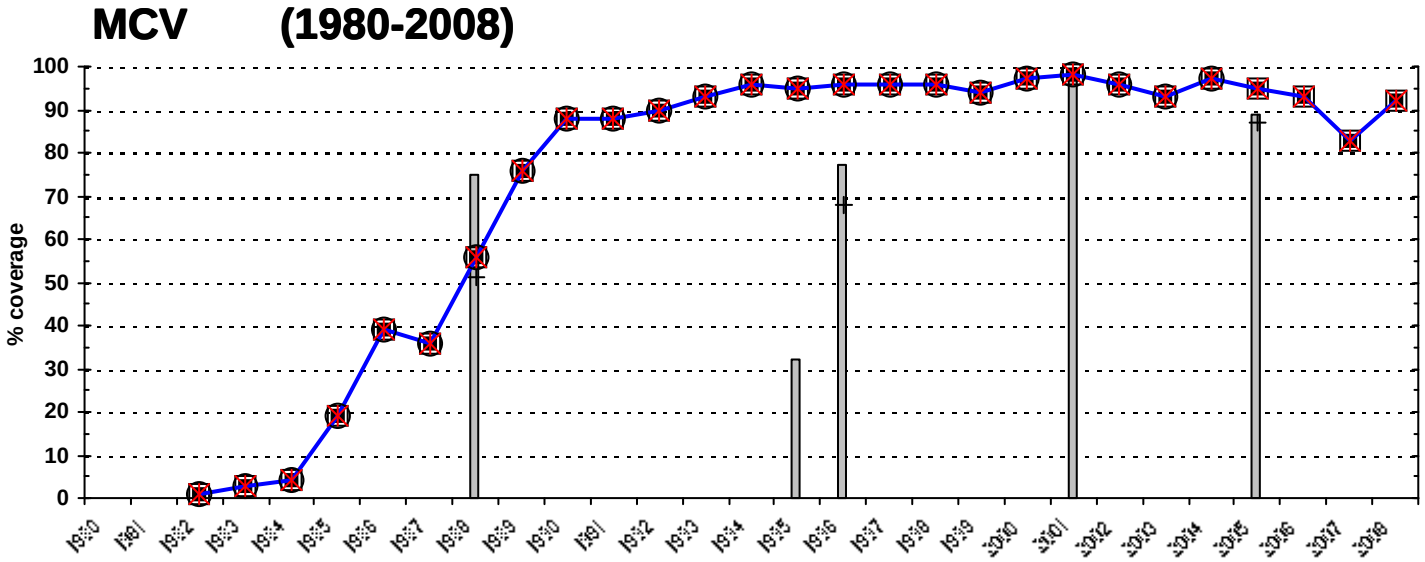

Description of trend

Estimated immunization coverage levels are based on reported data, supported by survey results. Survey data for 1995 and 1996 (MICS, DH report slightly lower coverage rates. Card retention, however, is very low in these surveys (13%, DHS). An EPI Cluster Survey in 1998 with ca retention of approximately 94% (National Review of the EPI, 1998) confirms reported coverage. There was a vaccine stock-out of 4 months ir 2007. The 2006 MICS survey has a card retention rate of 38.4%, affecting the accuracy of results for higher doses of multiple-dose antigens

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	1	1		
1983	3	3	3	3	3		
1984	4	4	4	4	4		
1985	19	19	19	19	19		
1986	39	39	39	39	39		
1987	36	36	36	36	36		
1988	56	56	56	56	56	75	51
1989	76	76	76	76	76		
1990	88	88	88	88	88		
1991	88	88	88	88	88		
1992	90	90	90	90	90		
1993	93	93	93	93	93		
1994	96	96	96	96	96		
1995	95	95	95	95	95	32	
1996	96	96	96	96	96	77	68
1997	96	96	96	96	96		
1998	96	96	96	96	96		
1999	94	94	94	94	94		
2000	97	97	97	97	97		
2001	98	98	98	98	98	98	
2002	96	96	96	96	96		
2003	93	93	93	93	93		
2004	97	97	97	97	97		
2005	95	95	95		95	89	87
2006	93	93	93		93		
2007	83	83	83		83		
2008	92	92	92		92		

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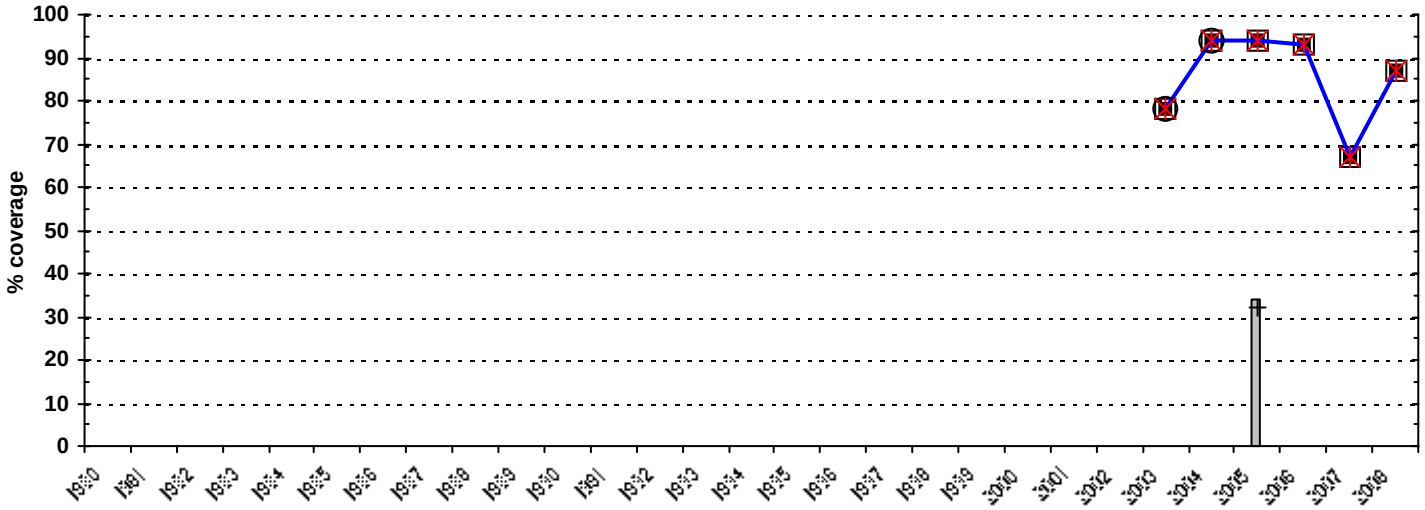
Viet Nam

HepB3 (1980-2008)



Description of trend

Hepatitis B vaccine was introduced in 1997 in part of the country and nationally in 2003. Estimates based on nationally reported data. There a stock-out of one month in 2007. The 2006 MICS survey has a card retention rate of 38.4%, affecting the accuracy of results for higher dos of multiple-dose antigens.

Data presented in chart

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		WHO (%)	UNICEF (%)			Survey 12-23 months	Survey <12 months
	—	□	■	○	✳	▯	+
1980							
1981							
1982							
1983							
1984							
1985							
1986							
1987							
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1989							
1990							
1991							
1992							
1993							
1994							
1995							
1996							
1997							
1998							
1999							
2000							
2001							
2002							
2003	78	78	78	78	78		
2004	94	94	94	94	94		
2005	94	94	94		94	34	32
2006	93	93	93		93		
2007	67	67	67		67		
2008	87	87	87		87		

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Viet Nam

Details Survey Data

Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
2005 Dieu tra dánh giá các muc tiêu ve tre em và phu nu Viet Nam 2006								
BCG	Card or History	95.2		12-23 m	555	38.4	2006	
BCG	C or H <12 month	93.7		12-23 m	555	38.4	2006	
DTP1	Card or History	94.2		12-23 m	555	38.4	2006	
DTP1	C or H <12 month	92		12-23 m	555	38.4	2006	
DTP3	Card or History	79.4		12-23 m	555	38.4	2006	
DTP3	C or H <12 month	76		12-23 m	555	38.4	2006	
Pol3	Card or History	75.6		12-23 m	555	38.4	2006	
Pol3	C or H <12 month	73.9		12-23 m	555	38.4	2006	
MCV	Card or History	88.8		12-23 m	555	38.4	2006	
MCV	C or H <12 month	87.2		12-23 m	555	38.4	2006	
HepB	Card or History	33.9		12-23 m	555	38.4	2006	
HepB	C or H <12 month	32.3		12-23 m	555	38.4	2006	
PAB	n.a.	80.3		CBAW	967	38.4	2006	
2001 Children Indicators in Vietnam 2001, 2002								
BCG	Card or History	96.7		12-23 m			2001	
DTP1	Card or History			12-23 m			2001	
DTP3	Card or History	96.2		12-23 m			2001	
Pol3	Card or History	96		12-23 m			2001	
MCV	Card or History	97.6		12-23 m			2001	
2001 Vietnam Demographic and Health Survey 2002, 2003								
BCG	Card or History	93.4		12-23 m	457	39.9	2002	
DTP1	Card or History	88.3		12-23 m	457	39.9	2002	
DTP3	Card or History	72.4		12-23 m	457	39.9	2002	
Pol3	Card or History	75.8		12-23 m	457	39.9	2002	
MCV	Card or History	83.2		12-23 m	457	39.9	2002	
1997 EPI Review Vietnam 1998								
PAB	Card or History	82.8		Women 15-49	1054		1998	Recently pregnant mothers
1997 National Review for the EPI 1998								
BCG	Card or History	96		12-23 m	1057		1998	Age group?
1996 Vietnam, Demographic and Health Survey 1997, 1999								
BCG	Card or History	89.5		12-23 m	631	13.3	1997	
BCG	C or H <12 month	87.1		12-23 m	631	13.3	1997	
DTP1	Card or History	92.1		12-23 m	631	13.3	1997	
DTP1	C or H <12 month	90.7		12-23 m	631	13.3	1997	
DTP3	Card or History	65.9		12-23 m	631	13.3	1997	
DTP3	C or H <12 month	65.1		12-23 m	631	13.3	1997	
Pol3	Card or History	61.2		12-23 m	631	13.3	1997	
Pol3	C or H <12 month	60.4		12-23 m	631	13.3	1997	
MCV	Card or History	77.1		12-23 m	631	13.3	1997	
MCV	C or H <12 month	67.5		12-23 m	631	13.3	1997	
1995 Implementation of Mid-Decade Goals for Vietnamese Children by 1995, 1997								
BCG	Card or History	82.3		< 5 y			1996	Children under 5, Confirmation method assumed

Viet Nam

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	80		< 5 y			1996	Children under 5, Confirmation method assumed
DTP3	Card or History	60.5		< 5 y			1996	Children under 5, Confirmation method assumed
Pol3	Card or History	60.4		< 5 y			1996	Children under 5, Confirmation method assumed
MCV	Card or History	31.9		< 5 y			1996	Children under 5, Confirmation method assumed

1988 Review of the Viet Nam EPI, 1989

BCG	Card or History	78.7		12-23 m			1989	Weighted national average
BCG	C or H <12 month	79.3	Valid	12-23 m			1989	Weighted national average, True national coverage for < 12 months should be somewhere between Card < and C or H < (p. 15)
DTP1	Card or History	80.7		12-23 m			1989	Weighted national average
DTP1	C or H <12 month	81.8	Valid	12-23 m			1989	Weighted national average, True national coverage for < 12 months should be somewhere between Card < and C or H < (p. 15)
DTP3	Card or History	76.5		12-23 m			1989	Weighted national average
DTP3	C or H <12 month	60.8	Valid	12-23 m			1989	Weighted national average, True national coverage for < 12 months should be somewhere between Card < and C or H < (p. 15)
Pol3	Card or History	76.5		12-23 m			1989	Weighted national average
Pol3	C or H <12 month	60.8	Valid	12-23 m			1989	Polio 3 considered the same as DPT3, see survey for explanation, p. 66, Weighted N. A., True national coverage for < 12 months should be somewhere between Card < and C or H < (p. 15).
MCV	Card or History	75		12-23 m			1989	Weighted national average
MCV	C or H <12 month	51.4	Valid	12-23 m			1989	Weighted national average, True national coverage for < 12 months should be somewhere between Card < and C or H < (p. 15)

Viet Nam

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.

From 2003 onward, reported PAB estimates have been used.

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[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.

Viet Nam

Year	PAB coverage estimate (%)
1980	
1981	
1982	
1983	
1984	
1985	
1986	
1987	
1988	5
1989	18
1990	24
1991	21
1992	38
1993	69
1994	76
1995	80
1996	89
1997	86
1998	82
1999	83
2000	86
2001	86
2002	86
2003	85
2004	85
2005	86
2006	87
2007	86
2008	84