

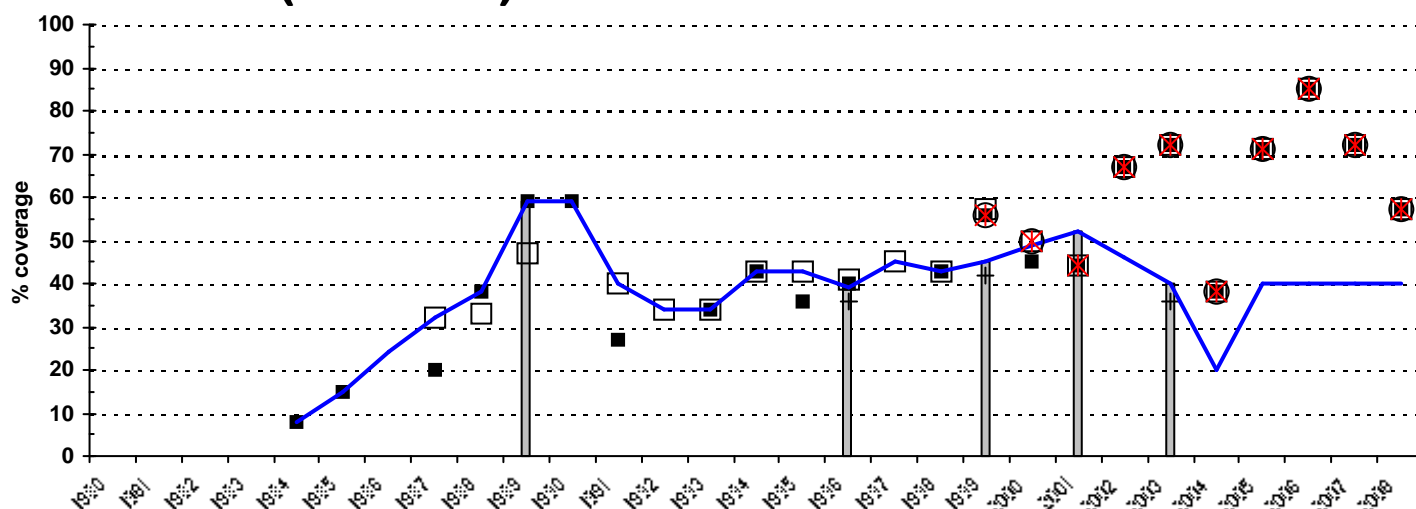
**WHO/UNICEF
Review of National Immunization Coverage
1980-2008**

Chad

July, 2009

Chad

BCG (1980-2008)



Description of trend

Estimates prior to 1999 are based on nationally reported data, supported by survey. Estimates since 1999 are based on survey results. The estimate is adjusted for six months of vaccine interruption affecting all 55 districts. WHO/UNICEF recommend conducting a high quality survey to verify reported levels of 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	8		8				
1985	15		15				
1986	24						
1987	32	32	20				
1988	38	33	38				
1989	59	47	59			59	
1990	59		59				
1991	40	40	27				
1992	34	34					
1993	34	34	34				
1994	43	43	43				
1995	43	43	36				
1996	39	41	40			39	36
1997	45	45					
1998	43	43	43				
1999	45	57	56	56	56	45	42
2000	49	50	45	50	50		
2001	52	44	44		44	52	
2002	46	67	67	67	67		
2003	40	72	72	72	72	40	36
2004	20	38	38	38	38		
2005	40	71	71	71	71		
2006	40	85	85	85	85		
2007	40	72	72	72	72		
2008	40	57	57	57	57		

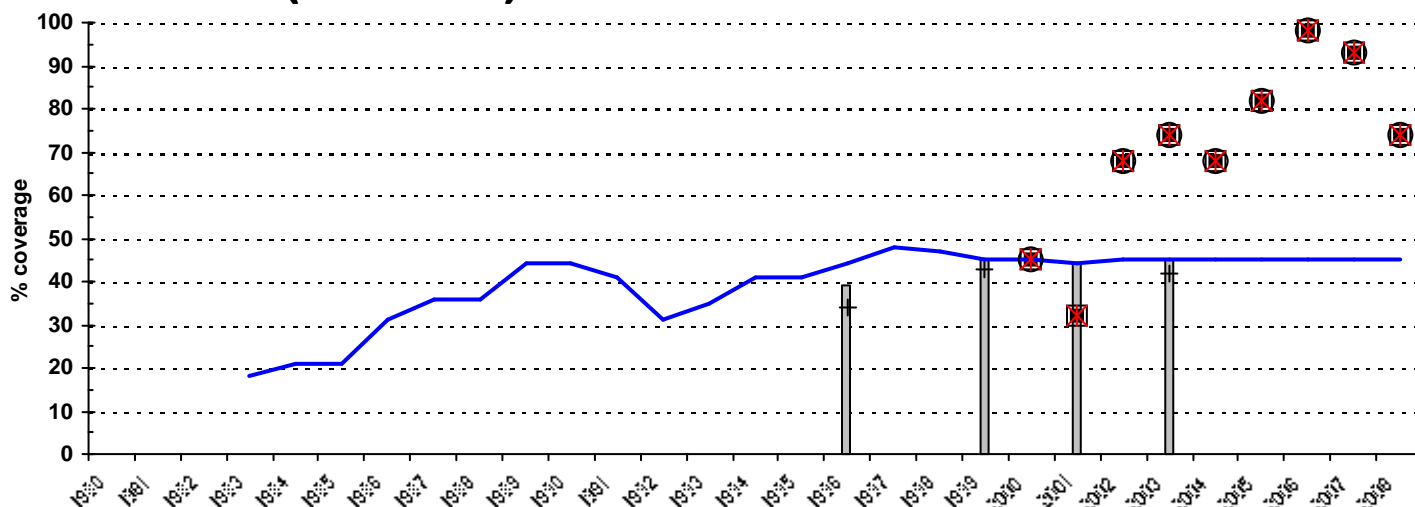
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Chad

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 1999 are based on survey results. For years prior to 1999 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. WHO/UNICEF recommends conducting a high quality survey to verify reported levels of 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	18						
1984	21						
1985	21						
1986	31						
1987	36						
1988	36						
1989	44						
1990	44						
1991	41						
1992	31						
1993	35						
1994	41						
1995	41						
1996	44					39	34
1997	48						
1998	47						
1999	45					45	43
2000	45	45	45	45	45		
2001	44	32	32	45	32	44	
2002	45	68	68	68	68		
2003	45	74	74	74	74	45	42
2004	45	68	68	68	68		
2005	45	82	82	82	82		
2006	45	98	98	98	98		
2007	45	93	93	93	93		
2008	45	74	74	74	74		

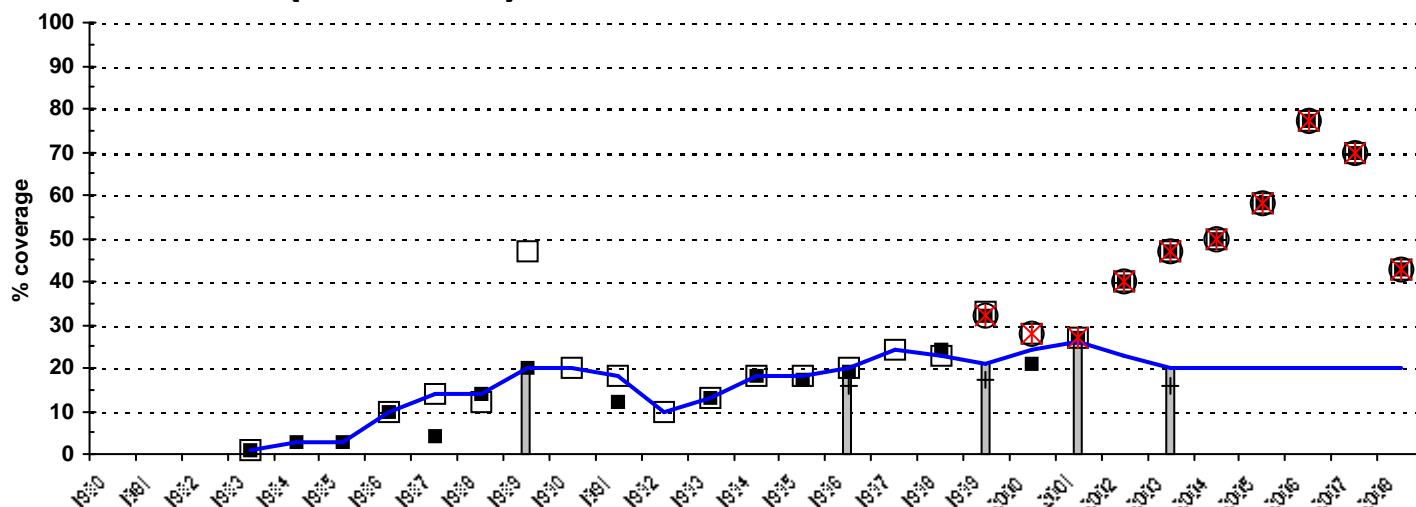
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Chad

DTP3 (1980-2008)



Description of trend

Estimates prior to 1999 are based on nationally reported data, supported by survey. Estimates since 1999 are based on survey results. The estimate is adjusted for six months of vaccine interruption affecting all 55 districts. WHO/UNICEF recommend conducting a high quality survey to verify reported levels of 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	1	1	1				
1984	3		3				
1985	3		3				
1986	10	10	10				
1987	14	14	4				
1988	14	12	14				
1989	20	47	20			20	
1990	20	20					
1991	18	18	12				
1992	10	10					
1993	13	13	13				
1994	18	18	18				
1995	18	18	17				
1996	20	20	19			20	16
1997	24	24					
1998	23	23	24				
1999	21	33	32	32	32	21	17
2000	24	28	21	28	28		
2001	26	27	27		27	26	
2002	23	40	40	40	40		
2003	20	47	47	47	47	20	16
2004	20	50	50	50	50		
2005	20	58	58	58	58		
2006	20	77	77	77	77		
2007	20	70	70	70	70		
2008	20	43	43	43	43		

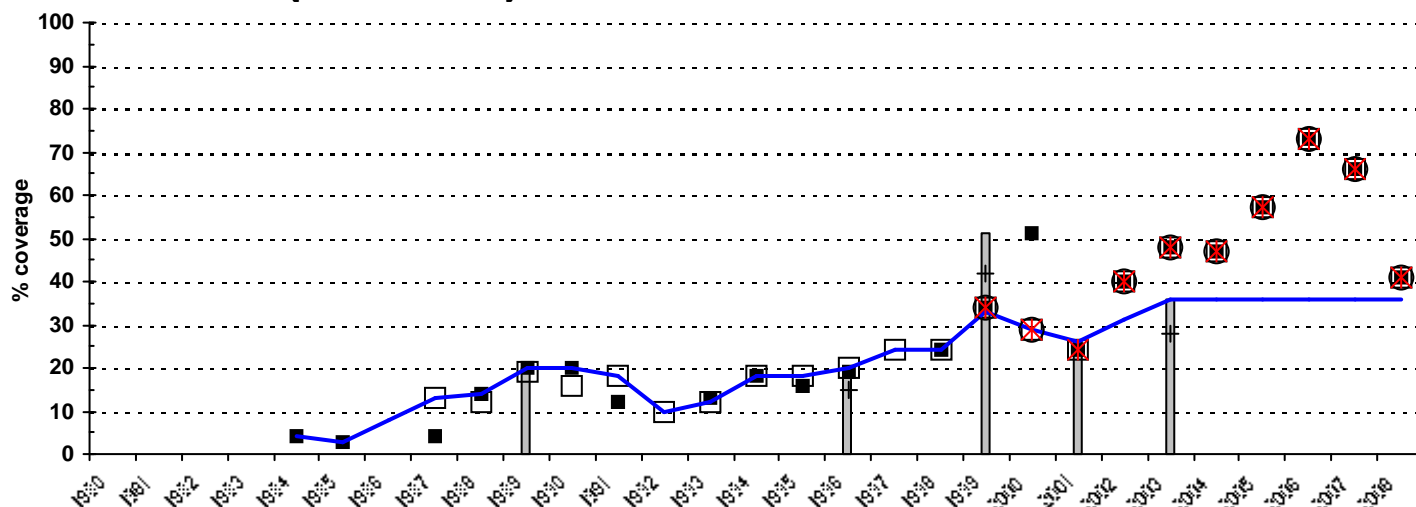
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Chad

Pol3 (1980-2008)



Description of trend

Estimates prior to 1999 are based on nationally reported data, supported by survey. Estimates since 1999 are based on survey results. The 1999 estimate is adjusted for six months of vaccine interruption affecting all 55 districts. The 1999 survey point most likely includes vaccinations given during polio campaigns. Estimates since 2001 are based on survey results. WHO/UNICEF recommend conducting a high quality survey to verify reported levels of 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	4		4				
1985	3		3				
1986	8						
1987	13	13	4				
1988	14	12	14				
1989	20	19	20			20	
1990	20	16	20				
1991	18	18	12				
1992	10	10					
1993	12	12	13				
1994	18	18	18				
1995	18	18	16				
1996	20	20	19			18	15
1997	24	24					
1998	24	24	24				
1999	33	34	34	34	34	51	42
2000	29	29	51	29	29		
2001	26	24	24		24	26	
2002	31	40	40	40	40		
2003	36	48	48	48	48		
2004	36	47	47	47	47	36	28
2005	36	57	57	57	57		
2006	36	73	73	73	73		
2007	36	66	66	66	66		
2008	36	41	41	41	41		

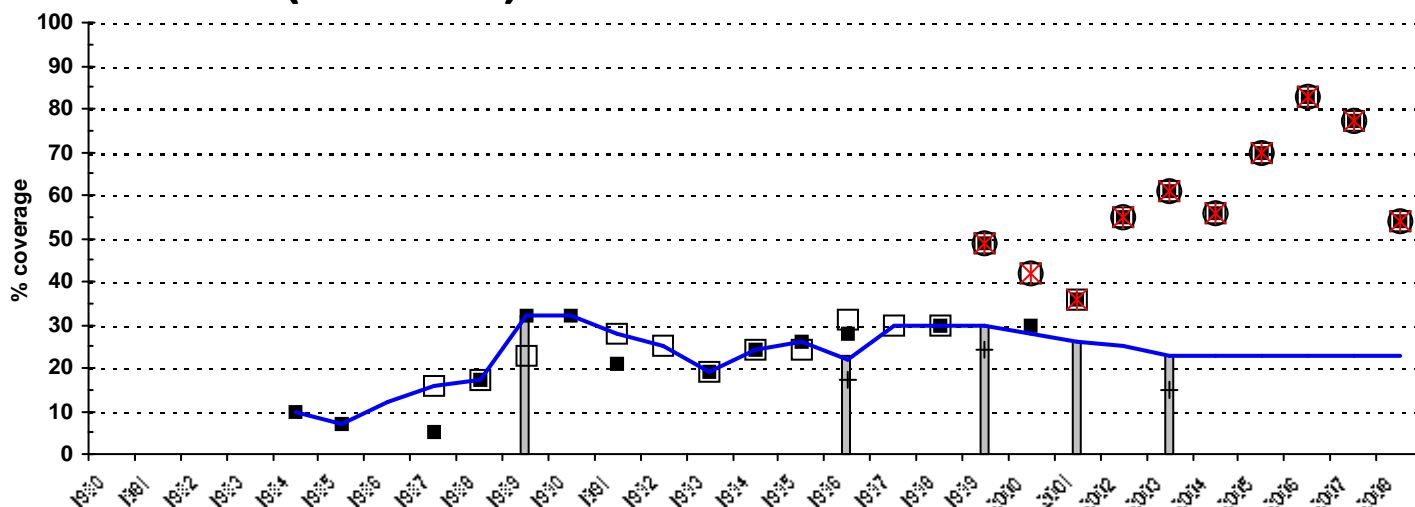
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Chad

MCV (1980-2008)



Description of trend

Estimates prior to 1999 are based on nationally reported data, supported by survey. Estimates since 1999 are based on survey results. The estimate is adjusted for six months of vaccine interruption affecting all 55 districts. WHO/UNICEF recommend conducting a high quality survey to verify reported levels of 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	10		10				
1985	7		7				
1986	12						
1987	16	16	5				
1988	17	17	17				
1989	32	23	32			32	
1990	32		32				
1991	28	28	21				
1992	25	25					
1993	19	19	19				
1994	24	24	24				
1995	26	24	26				
1996	22	31	28			23	17
1997	30	30					
1998	30	30	30				
1999	30	49	49	49	49	30	24
2000	28	42	30	42	42		
2001	26	36	36		36	26	
2002	25	55	55	55	55		
2003	23	61	61	61	61	23	15
2004	23	56	56	56	56		
2005	23	70	70	70	70		
2006	23	83	83	83	83		
2007	23	77	77	77	77		
2008	23	54	54	54	54		

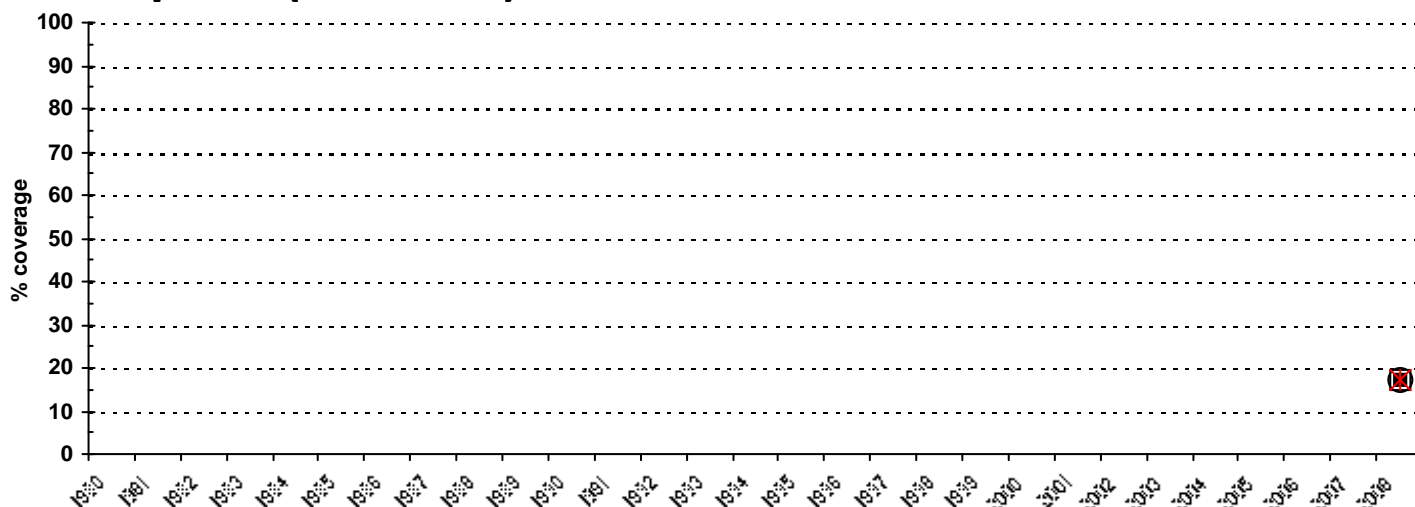
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Chad

HepB3 (1980-2008)



Description of trend

DTP-HepB-Hib pentavalent combination vaccine was introduced in 2008. The 2008 estimate is based on the proportional reduction applied to the 2008 DTP3 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							
2004							
2005							
2006							
2007							
2008	10	17	17	17	17		

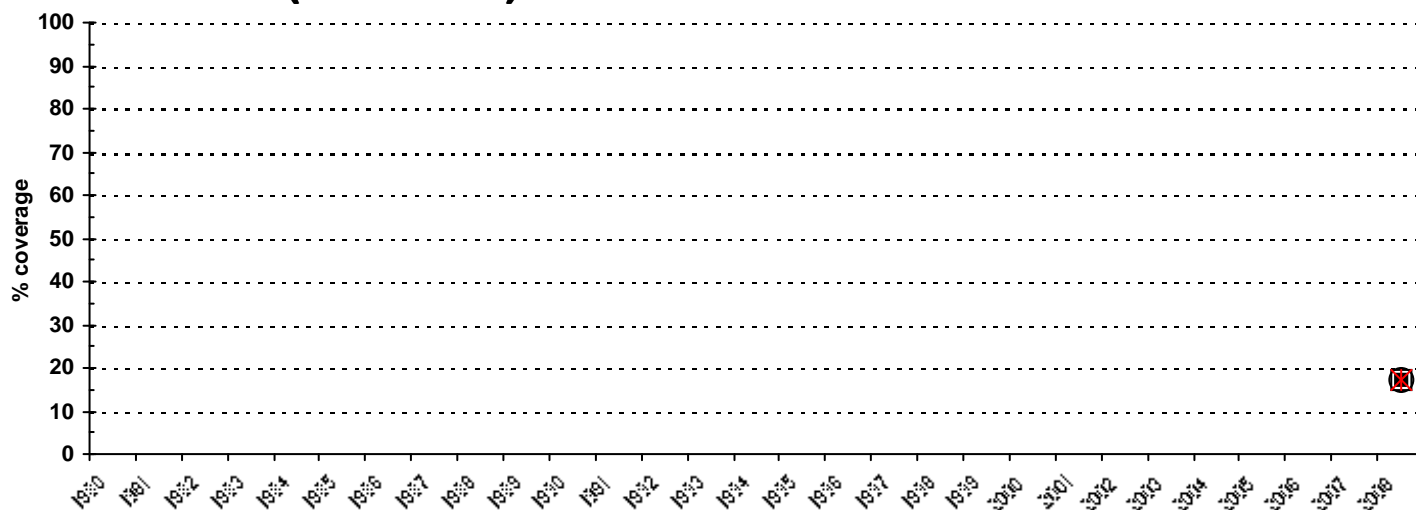
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Chad

Hib3 (1980-2008)



Description of trend

DTP-HepB-Hib pentavalent combination vaccine was introduced in 2008. The 2008 estimate is based on the proportional reduction applied to 2008 DTP3 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							
2004							
2005							
2006							
2007							
2008	10	17	17	17	17		

*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.

Chad

Details Survey Data

Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
2003 L'Enquête Démographique et de Santé au Tchad, 2004								
BCG	History	19.9		12-23 m	941	24.5	2004	
BCG	Card or history	40.2		12-23 m	941	24.5	2004	
BCG	Card	20.3		12-23 m	941	24.5	2004	
BCG	C or H <12 month	36.5		12-23 m	941	24.5	2004	
DTP1	History	21		12-23 m	941	24.5	2004	
DTP1	Card or history	44.6		12-23 m	941	24.5	2004	
DTP1	Card	23.6		12-23 m	941	24.5	2004	
DTP1	C or H <12 month	41.5		12-23 m	941	24.5	2004	
DTP3	History	8.5		12-23 m	941	24.5	2004	
DTP3	Card or history	20.1		12-23 m	941	24.5	2004	
DTP3	Card	11.6		12-23 m	941	24.5	2004	
DTP3	C or H <12 month	15.9		12-23 m	941	24.5	2004	
Pol3	History	23.2		12-23 m	941	24.5	2004	
Pol3	Card or history	35.5		12-23 m	941	24.5	2004	
Pol3	Card	12.3		12-23 m	941	24.5	2004	
Pol3	C or H <12 month	28.1		12-23 m	941	24.5	2004	
MCV	History	9.2		12-23 m	941	24.5	2004	
MCV	Card or history	22.8		12-23 m	941	24.5	2004	
MCV	Card	13.6		12-23 m	941	24.5	2004	
MCV	C or H <12 month	14.8		12-23 m	941	24.5	2004	
2001 République du Tchad, Revue du Programme Elargi de Vaccination, 2002								
BCG	Card or History	51.5		12-23 m	3159	39.1	2002	
DTP1	Card or History	44		12-23 m	3159	39.1	2002	
DTP3	Card or History	25.5		12-23 m	3159	39.1	2002	
Pol3	Card or History	26		12-23 m	3159	39.1	2002	
MCV	Card or History	26		12-23 m	3159	39.1	2002	
1999 République du Tchad, Enquête de grappes à indicateurs multiples, Rapport complet, 2000								
BCG	Card or History	45.4		12-23 m	873	23	2000	
BCG	C or H <12 month	42		12-23 m	873	23	2000	
DTP1	Card or History	45.1		12-23 m	873	23	2000	
DTP1	C or H <12 month	42.8		12-23 m	873	23	2000	
DTP3	Card or History	20.7		12-23 m	873	23	2000	
DTP3	C or H <12 month	17.3		12-23 m	873	23	2000	
Pol3	Card or History	50.6		12-23 m	873	23	2000	
Pol3	C or H <12 month	42.3		12-23 m	873	23	2000	
MCV	Card or History	29.7		12-23 m	873	23	2000	
MCV	C or H <12 month	24.5		12-23 m	873	23	2000	
PAB	Card or History	38.5		Women 15-49			2000	
1996 Enquête Démographique et de Santé Tchad 1996-1997, 1998								
BCG	Card or History	38.8		12-23 m	1211		1996/97	
BCG	C or H <12 month	36.3		12-23 m	1211		1996/97	
DTP1	Card or History	39.1		12-23 m	1211		1996/97	
DTP1	C or H <12 month	34.2		12-23 m	1211		1996/97	
DTP3	Card or History	19.5		12-23 m	1211		1996/97	
DTP3	C or H <12 month	16		12-23 m	1211		1996/97	
Pol3	Card or History	18.1		12-23 m	1211		1996/97	
Pol3	C or H <12 month	15		12-23 m	1211		1996/97	

Chad

Details Survey Data

Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
MCV	Card or History	22.8		12-23 m	1211		1996/97	
MCV	C or H <12 month	17.2		12-23 m	1211		1996/97	

1989 *Enquête Nationale de Couverture Vaccinale 1990*

BCG	Card or History	59		12-23 m			1990	
DTP1	Card or History			12-23 m			1990	
DTP3	Card or History	20		12-23 m			1990	
Pol3	Card or History	20		12-23 m			1990	
MCV	Card or History	32		12-23 m			1990	

Chad

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.

Chad

Year	PAB coverage estimate (%)
1980	
1981	
1982	
1983	
1984	
1985	
1986	
1987	8
1988	10
1989	19
1990	14
1991	13
1992	11
1993	56
1994	60
1995	65
1996	43
1997	49
1998	47
1999	43
2000	39
2001	37
2002	48
2003	60
2004	61
2005	61
2006	60
2007	60
2008	58