

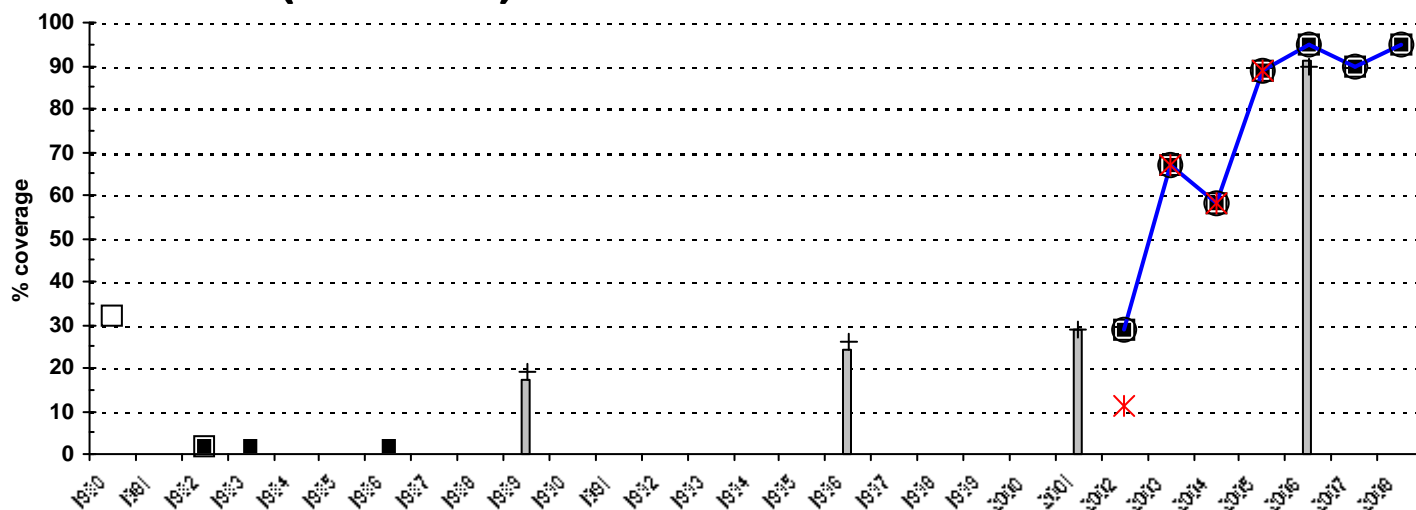
**WHO/UNICEF
Review of National Immunization Coverage
1980-2008**

Jordan

July, 2009

Jordan

BCG (1980-2008)



Description of trend

Between 1983 and 2002 BCG was administered at school entry level (approx. age six). BCG at birth for all children introduced in 2001.

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		32					
1981							
1982		2	2				
1983			2				
1984							
1985							
1986			2				
1987							
1988							
1989						17	19
1990							
1991							
1992							
1993							
1994							
1995							
1996						24	26
1997							
1998							
1999							
2000							
2001						29	29
2002	29	29	29	29	11		
2003	67	67	67	67	67		
2004	58	58	58	58	58		
2005	89	89	89	89	89		
2006	95	95	95	95	105	91	90
2007	90	90	90	90	111		
2008	95	95	95	95	109		

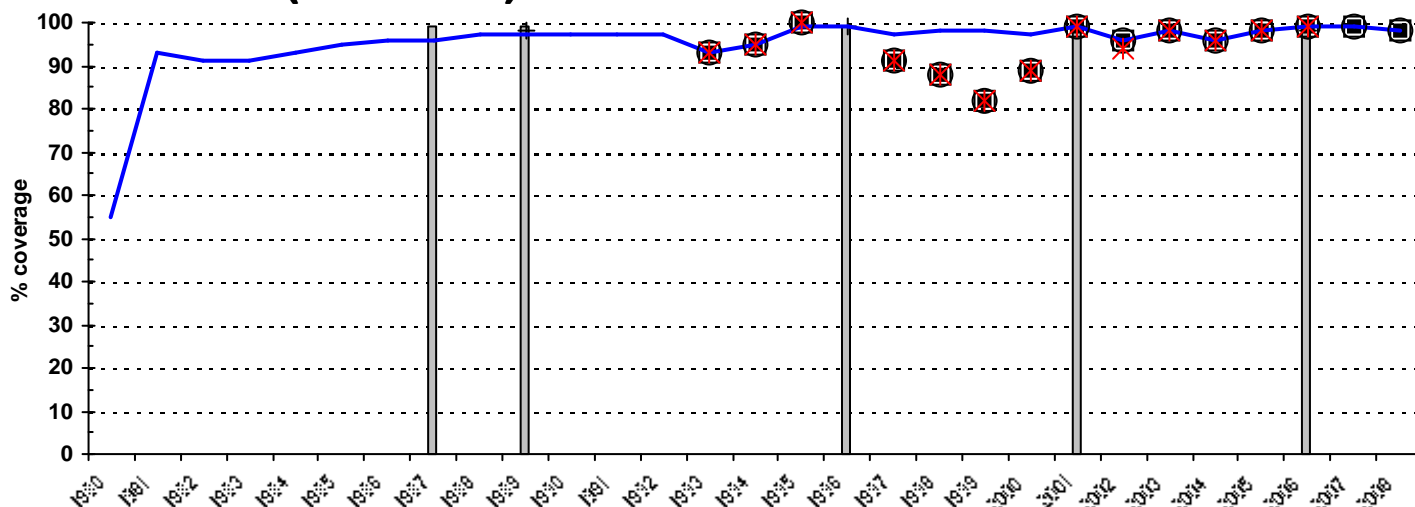
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Jordan

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 199 onward. DTP1 estimates from 2000-2004 are based on these reports, except for 2000 where the reported DTP1 coverage was less than the reported DTP3. 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 resulted from an analysis of 282 surveys conducted in countries which were published between 1980 and 2004. Surveys support 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	55						
1981	93						
1982	91						
1983	91						
1984	93						
1985	95						
1986	96						
1987	96					99	
1988	97						
1989	97					99	98
1990	97						
1991	97						
1992	97						
1993	93	93	93	93	93		
1994	95	95	95	95	95		
1995	99	100	100	100	100		
1996	99	101	101	101	101	99	99
1997	97	91	91	91	91		
1998	98	88	88	88	88		
1999	98	82	82	82	82		
2000	97	89	89	89	89		
2001	99	99	99	99	99	100	99
2002	96	96	96	96	94		
2003	98	98	98	98	98		
2004	96	96	96	96	96		
2005	98	98	98	98	98		
2006	99	99	99	99	99	99	98
2007	99	99	99	99	106		
2008	98	98	98	98	107		

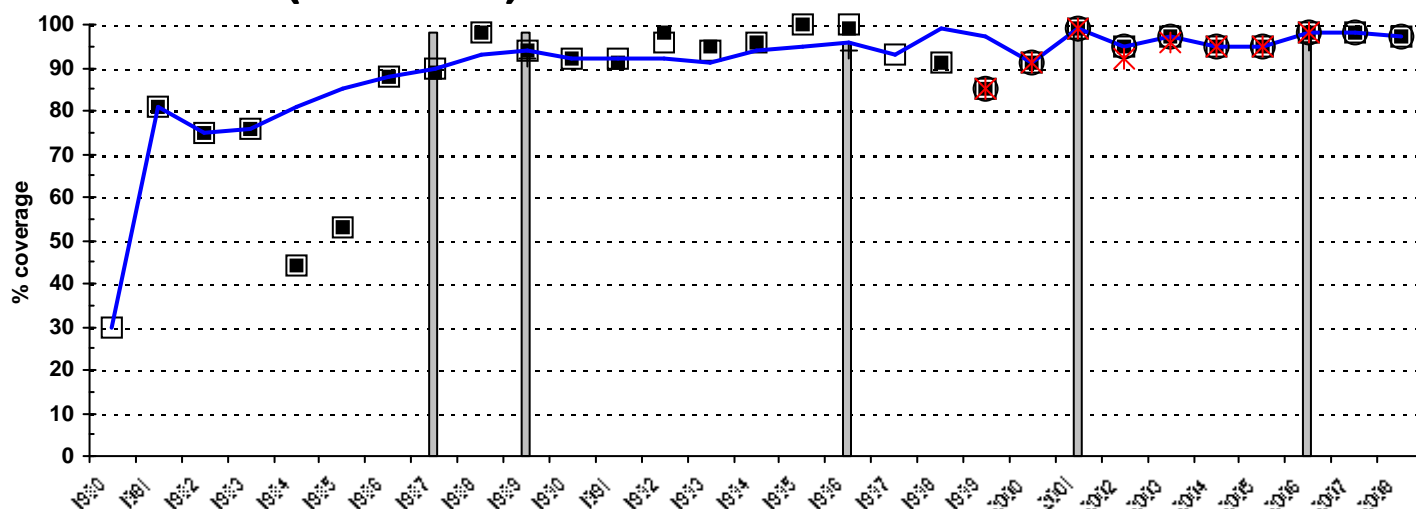
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Jordan

DTP3 (1980-2008)



Description of trend

The EPI Program was partially introduced in 1980 and fully implemented in 1981. The low officially reported rates in 1984 and 1985 seem to be an underestimate. The EPI Cluster Survey for that year is not considered since the confirmation method is not clear. In the early 1990s officially reported data seem to be an overestimate due to the large influx of people into the country following the gulf war. Older birth cohorts reported the DHS 1997 are used for the estimation of coverage between 1992-1995. The coverage rates in 1998 and 1999 are corrected due to a miscalculation of the denominator. Surveys support 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	30	30					
1981	81	81	81				
1982	75	75	75				
1983	76	76	76				
1984	81	44	44				
1985	85	53	53				
1986	88	88	88				
1987	90	90	89			98	
1988	93	98	98				
1989	94	94	94			98	92
1990	92	92	92				
1991	92	92	91				
1992	92	96	98				
1993	91	94	95				
1994	94	96	96				
1995	95	100	100				
1996	96	100	99			96	94
1997	93	93					
1998	99	91	91				
1999	97	85	85	85	85		
2000	91	91	91	91	91		
2001	99	99	99	99	99	98	98
2002	95	95	95	95	92		
2003	97	97	97	97	96		
2004	95	95	95	95	95		
2005	95	95	95	95	95		
2006	98	98	98	98	98	97	96
2007	98	98	98	98	105		
2008	97	97	97	97	105		

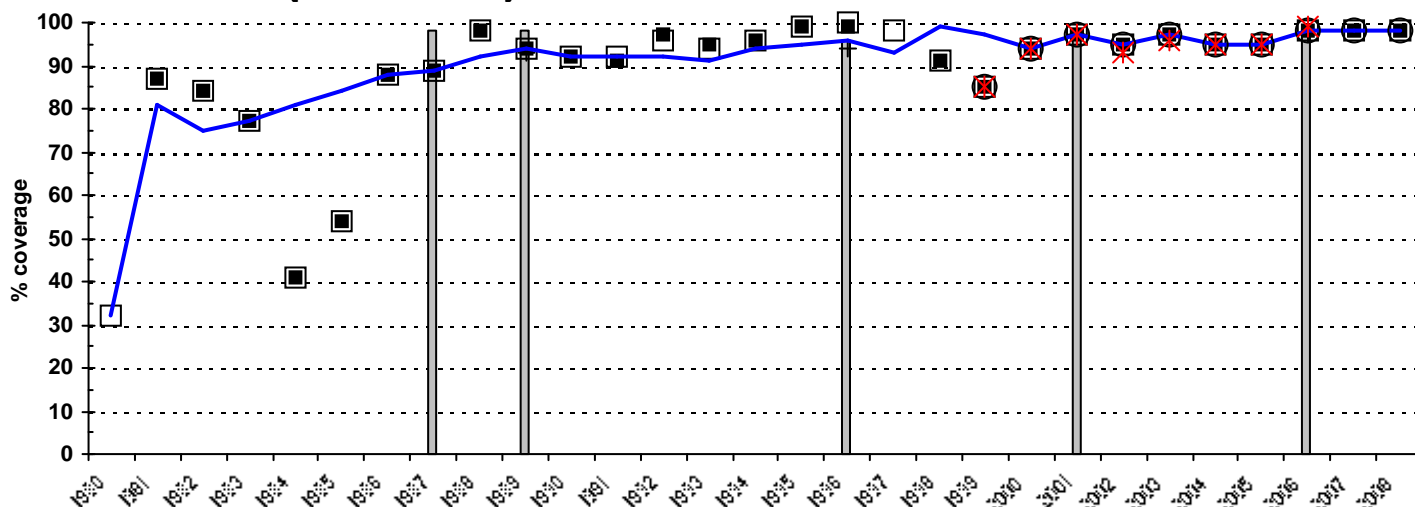
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Jordan

Pol3 (1980-2008)



Description of trend

The EPI Program was partially introduced in 1980 and fully implemented in 1981. The low officially reported rates in 1984 and 1985 seem to be underestimate. The EPI Cluster Survey for that year is not considered since the confirmation method is not clear. In the early 1990s officially reported data seem to be an overestimate due to the large influx of people into the country following the gulf war. Older birth cohorts reported DHS 1997 are used for the estimation of coverage between 1992-1995. The coverage rates in 1998 and 1999 are corrected due to a miscalculation of the denominator. Surveys support 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	32	32					
1981	81	87	87				
1982	75	84	84				
1983	77	77	77				
1984	81	41	41				
1985	84	54	54				
1986	88	88	88				
1987	89	89	89			98	
1988	92	98	98				
1989	94	94	94			98	93
1990	92	92	92				
1991	92	92	91				
1992	92	96	97				
1993	91	94	95				
1994	94	96	96				
1995	95	99	99				
1996	96	100	99			96	94
1997	93	98					
1998	99	91	91				
1999	97	85	85	85	85		
2000	94	94	94	94	94		
2001	97	97	97	97	97	98	97
2002	95	95	95	95	93		
2003	97	97	97	97	96		
2004	95	95	95	95	95		
2005	95	95	95	95	95		
2006	98	98	98	98	99	98	97
2007	98	98	98	98	105		
2008	98	98	98	98	104		

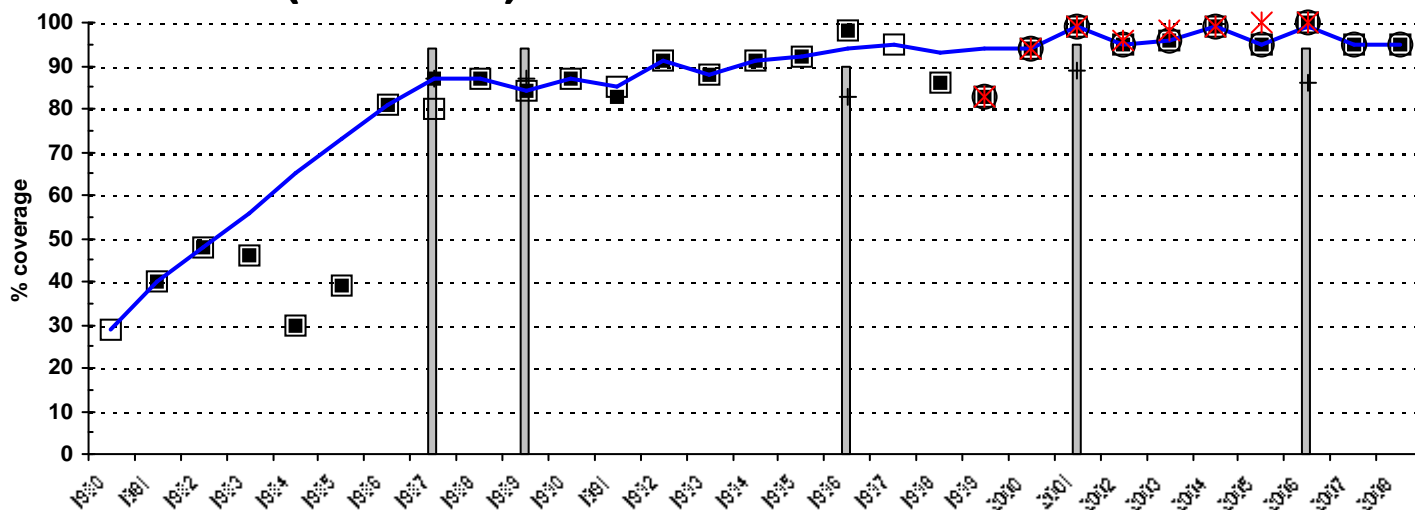
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Jordan

MCV (1980-2008)



Description of trend

Low officially reported data in 1984 and 1985 seem to be an underestimate. According to officially reported data, coverage is at 87% in 1987. EPI Cluster Survey for that year is not considered since the confirmation method is not clear. The coverage rates in 1998 and 1999 are correct due to a miscalculation of the denominator. Surveys support 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	29	29					
1981	40	40	40				
1982	48	48	48				
1983	56	46	46				
1984	65	30	30				
1985	73	39	39				
1986	81	81	81				
1987	87	80	87			94	87
1988	87	87	87				
1989	84	84	84			94	87
1990	87	87	87				
1991	85	85	83				
1992	91	91	91				
1993	88	88	88				
1994	91	91	91				
1995	92	92	92				
1996	94	98	98			90	83
1997	95	95					
1998	93	86	86				
1999	94	83	83	83	83		
2000	94	94	94	94	94		
2001	99	99	99	99	99	95	89
2002	95	95	95	95	96		
2003	96	96	96	96	98		
2004	99	99	99	99	99		
2005	95	95	95	95	100		
2006	99	100	100	100	100	94	86
2007	95	95	95	95	102		
2008	95	95	95	95	110		

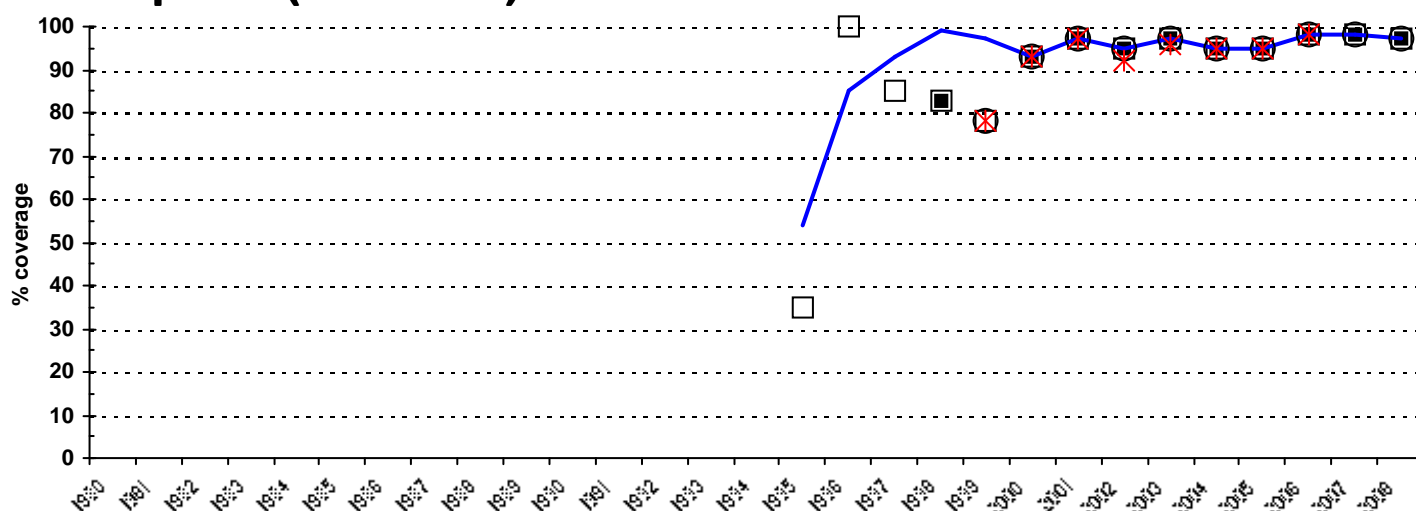
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Jordan

HepB3 (1980-2008)



Description of trend

Coverage rates for Hepatitis are available since 1995 following a campaign. It is administered together with DPT3/Pol3. In 1995 the vaccine was only given during 2/3 of the year, the remainder of this birth cohort was vaccinated in 1996. The 1996 officially reported rate is an overestimate since part of the previous year's birth cohort is included in the numerator - similarly 1995 is an underestimate. Between 1997 and 1999 coverage is assumed to be the same as for DPT3/Pol3; adjustments are made to account for problem in the denominator.

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	54	35					
1996	85	100					
1997	93	85					
1998	99	83	83				
1999	97	78		78	78		
2000	93	93	93	93	93		
2001	97	97	97	97	97		
2002	95	95	95	95	92		
2003	97	97	97	97	96		
2004	95	95	95	95	95		
2005	95	95	95	95	95		
2006	98	98	98	98	98		
2007	98	98	98	98	105		
2008	97	97	97	97	105		

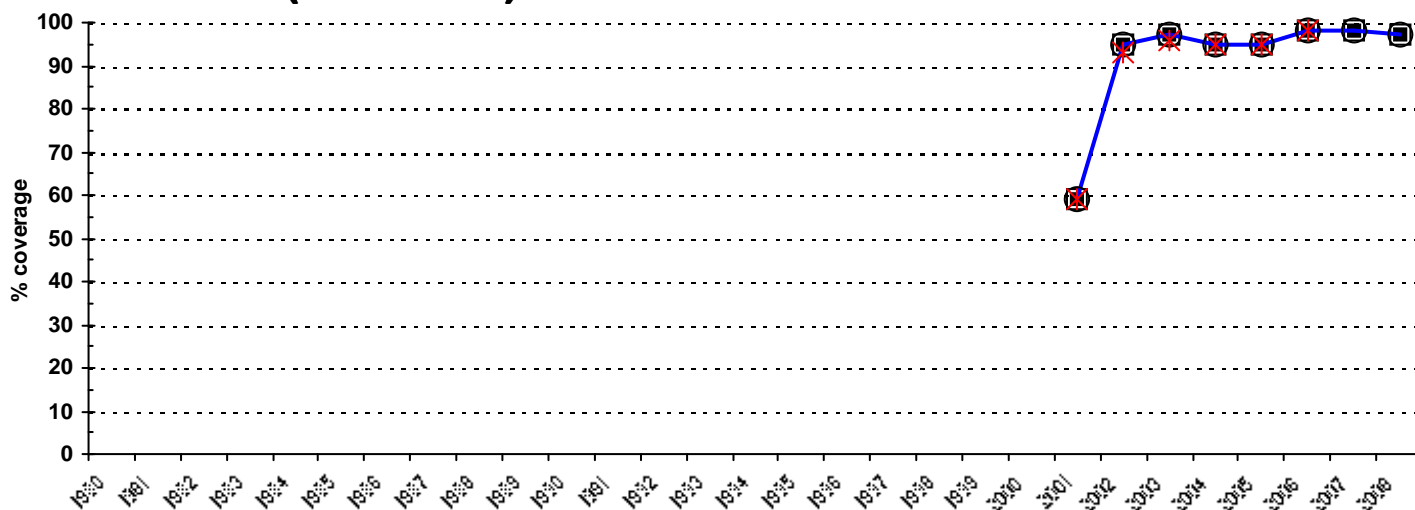
*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

**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.

Jordan

Hib3 (1980-2008)



Description of trend

Hib vaccine introduced in 2001.

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	59	59	59	59	59		
2002	95	95	95	95	93		
2003	97	97	97	97	96		
2004	95	95	95	95	95		
2005	95	95	95	95	95		
2006	98	98	98	98	98		
2007	98	98	98	98	105		
2008	97	97	97	97	105		

*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.

Jordan

Details Survey Data

Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
2006 Jordan Population and Family Health Survey 2007								
BCG	Card or History	91.3		12-23 m	1870	90.3	2007	
BCG	C or H <12 month	89.5		12-23 m	1870	90.3	2007	
DTP1	Card or History	98.9		12-23 m	1870	90.3	2007	
DTP1	C or H <12 month	98.4		12-23 m	1870	90.3	2007	
DTP3	Card or History	97.4		12-23 m	1870	90.3	2007	
DTP3	C or H <12 month	96		12-23 m	1870	90.3	2007	
Pol3	Card or History	98		12-23 m	1870	90.3	2007	
Pol3	C or H <12 month	96.6		12-23 m	1870	90.3	2007	
MCV	Card or History	94.3		12-23 m	1870	90.3	2007	
MCV	C or H <12 month	85.8		12-23 m	1870	90.3	2007	
2005 Jordan Population and Family Health Survey 2007								
PAB	n.a.	27.1		CBAW	6446		2007	
2001 Jordan Population and Family Health Survey 2002								
BCG	Card or History	28.8		12-23 m	1135	77.6	2002	
BCG	C or H <12 month	28.8		12-23 m	1135	77.6	2002	
DTP1	Card or History	99.5		12-23 m	1135	77.6	2002	
DTP1	C or H <12 month	99.3		12-23 m	1135	77.6	2002	
DTP3	Card or History	98.2		12-23 m	1135	77.6	2002	
DTP3	C or H <12 month	97.9		12-23 m	1135	77.6	2002	
Pol3	Card or History	97.6		12-23 m	1135	77.6	2002	
Pol3	C or H <12 month	97.3		12-23 m	1135	77.6	2002	
MCV	Card or History	95.2		12-23 m	1135	77.6	2002	
MCV	C or H <12 month	88.6		12-23 m	1135	77.6	2002	
1996 Jordan Population and Family Health Survey 1997, 1998								
BCG	Card or History	24.1		12-23 m	1275	81.2	1997	BCG not in immunization schedule according to WHO 99
BCG	C or H <12 month	23.3		12-23 m	1275	81.2	1997	
BCG	C or H <12 month	22.6		24-35 m	1252	78.2	1997	
BCG	C or H <12 month	26.3		36-47 m	1272	76	1997	
BCG	C or H <12 month	24.1		48-59 m	1190	68.1	1997	
DTP1	Card or History	99.1		12-23 m	1275	81.2	1997	
DTP1	C or H <12 month	98.9		12-23 m	1275	81.2	1997	
DTP1	C or H <12 month	97.7		24-35 m	1252	78.2	1997	
DTP1	C or H <12 month	98.6		36-47 m	1272	76	1997	
DTP1	C or H <12 month	97.1		48-59 m	1190	68.1	1997	
DTP3	Card or History	95.9		12-23 m	1275	81.2	1997	
DTP3	C or H <12 month	93.5		12-23 m	1275	81.2	1997	
DTP3	C or H <12 month	93.5		24-35 m	1252	78.2	1997	
DTP3	C or H <12 month	93.7		36-47 m	1272	76	1997	
DTP3	C or H <12 month	91.3		48-59 m	1190	68.1	1997	
Pol3	Card or History	95.7		12-23 m	1275	81.2	1997	
Pol3	C or H <12 month	93.7		12-23 m	1275	81.2	1997	
Pol3	C or H <12 month	93.7		24-35 m	1252	78.2	1997	
Pol3	C or H <12 month	93.6		36-47 m	1272	76	1997	
Pol3	C or H <12 month	90.6		48-59 m	1190	68.1	1997	
MCV	Card or History	89.9		12-23 m	1275	81.2	1997	
MCV	C or H <12 month	82.9		12-23 m	1275	81.2	1997	
MCV	C or H <12 month	82.7		24-35 m	1252	78.2	1997	

Jordan

Details Survey Data

Year Source

Antigen	Confirmation method	% coverage	Compliance with schedule	Age group	Sample size	% cards seen	Survey year	Comments
MCV	C or H <12 month	81.3		36-47 m	1272	76	1997	
MCV	C or H <12 month	79.2		48-59 m	1190	68.1	1997	

1989 Jordan EPI/CDD & Child Mortality Survey, 1991

BCG	Card or History			12-23 m			1990	
BCG	C or H <12 month			12-23 m			1990	
DTP1	Card or History	99		12-23 m			1990	
DTP1	C or H <12 month	98		12-23 m			1990	
DTP3	Card or History	98		12-23 m			1990	
DTP3	C or H <12 month	92		12-23 m			1990	
Pol3	Card or History	98		12-23 m			1990	
Pol3	C or H <12 month	92		12-23 m			1990	
MCV	Card or History	94		12-23 m			1990	
MCV	C or H <12 month	87		12-23 m			1990	

1989 Jordan Population and Family Health Survey 1990, 1992

BCG	Card or History	16.8		12-23 m	1615	64	1990	BCG not in immunization schedule according to WHO 99
BCG	C or H <12 month	15.8		12-23 m	1615	64	1990	
BCG	C or H <12 month	18.1		24-35 m	1629	57.6	1990	
BCG	C or H <12 month	18.7		36-47 m	1618	56.5	1990	
BCG	C or H <12 month	17.5		48-59 m	1549	50.4	1990	
DTP1	Card or History	97.5		12-23 m	1615	64	1990	
DTP1	C or H <12 month	96		12-23 m	1615	64	1990	
DTP1	C or H <12 month	95.3		24-35 m	1629	57.6	1990	
DTP1	C or H <12 month	96.2		36-47 m	1618	56.5	1990	
DTP1	C or H <12 month	91.4		48-59 m	1549	50.4	1990	
DTP3	Card or History	94.8		12-23 m	1615	64	1990	
DTP3	C or H <12 month	92.2		12-23 m	1615	64	1990	
DTP3	C or H <12 month	90.7		24-35 m	1629	57.6	1990	
DTP3	C or H <12 month	91.2		36-47 m	1618	56.5	1990	
DTP3	C or H <12 month	85.2		48-59 m	1549	50.4	1990	
Pol3	Card or History	95.3		12-23 m	1615	64	1990	
Pol3	C or H <12 month	92.6		12-23 m	1615	64	1990	
Pol3	C or H <12 month	90.9		24-35 m	1629	57.6	1990	
Pol3	C or H <12 month	91.2		36-47 m	1618	56.5	1990	
Pol3	C or H <12 month	85.4		48-59 m	1549	50.4	1990	
MCV	Card or History	89.4		12-23 m	1615	64	1990	
MCV	C or H <12 month	76		12-23 m	1615	64	1990	
MCV	C or H <12 month	77.7		24-35 m	1629	57.6	1990	
MCV	C or H <12 month	74.1		36-47 m	1618	56.5	1990	
MCV	C or H <12 month	68		48-59 m	1549	50.4	1990	

1987 Immunization, Diarrhoeal Disease, Maternal and Child Mortality Survey, Jordan 1988, Evaluation Series No. 2

BCG	Card or History			12-23 m		84.9	1988	Weighted average, confirmation method not clear
DTP1	Card or History	99		12-23 m		84.9	1988	Weighted average, confirmation method not clear
DTP3	Card or History	98		12-23 m		84.9	1988	Weighted average, confirmation method not clear
Pol3	Card or History	98		12-23 m		84.9	1988	Weighted average, confirmation method not clear
MCV	Card or History	94		12-23 m		84.9	1988	Weighted average, confirmation method not clear
MCV	C or H <12 month	87		12-23 m		84.9	1988	Weighted average, confirmation method not clear

Jordan

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.

Jordan

Year	PAB coverage estimate (%)
1980	
1981	2
1982	7
1983	10
1984	13
1985	52
1986	40
1987	52
1988	64
1989	47
1990	49
1991	51
1992	53
1993	53
1994	48
1995	47
1996	58
1997	52
1998	46
1999	41
2000	44
2001	41
2002	54
2003	46
2004	53
2005	67
2006	86
2007	87
2008	87