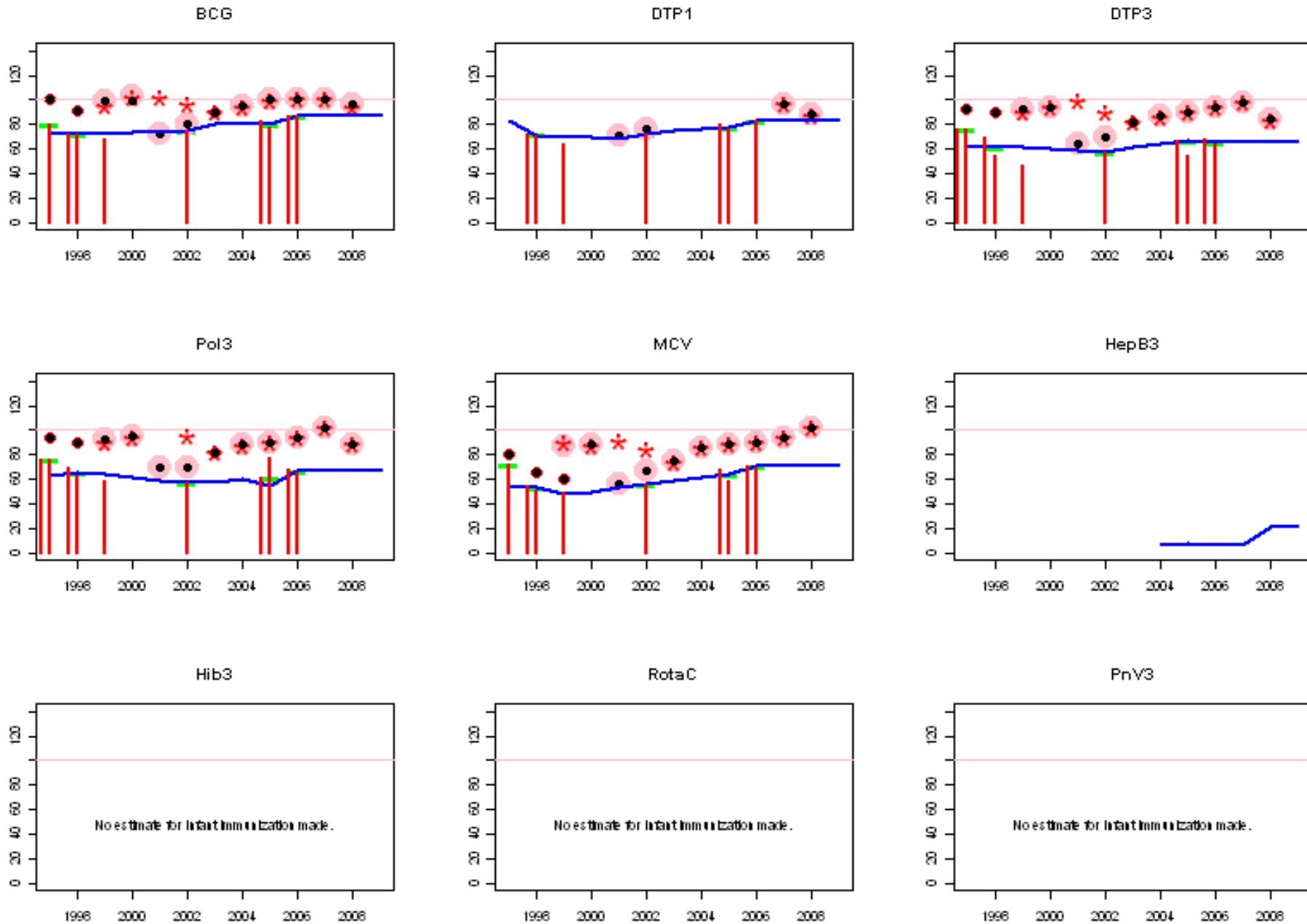
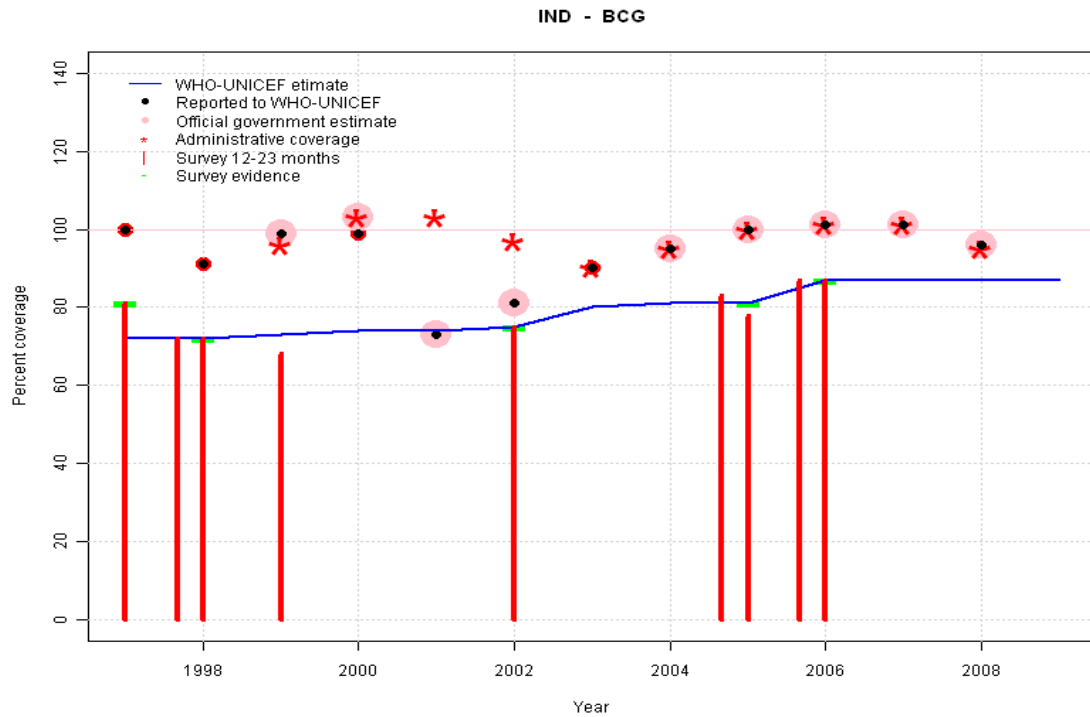


India: WHO and UNICEF estimates of immunization coverage, 1997 - 2009



India - BCG



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	72	72	73	74	74	75	80	81	81	87	87	87	87
Reported	100	91	99	99	73	81	90	95	100	101	101	96	NA
Official	NA	NA	99	103	73	81	NA	95	100	101	101	96	NA
Administrative	NA	NA	96	103	103	97	90	95	100	101	101	95	NA
Survey	81	72	NA	NA	NA	75	NA	NA	81	87	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on survey results. Reported data (91 percent) not consistent with survey results (72 percent). 2 surveys, results = 72, 72, mean = 72 percent.

1999: Estimate interpolated between 1998 and 2002 estimates. Survey results of 68 percent with sample size 0 ignored; sample size less than 300.

2000: Estimate interpolated between 1998 and 2002 estimates.

2001: Estimate interpolated between 1998 and 2002 estimates.

2002:

2003: Reported data (90 percent) calibrated to 2002 and 2005 levels.

2004: Reported data (95 percent) calibrated to 2002 and 2005 levels. Nationally reported data are for 9 months only.

2005: Estimate based on survey results. Reported data (99 percent) not consistent with survey results (81 percent). 2 surveys, results = 83, 78, mean = 81 percent. Nationally reported data are for 9 months only.

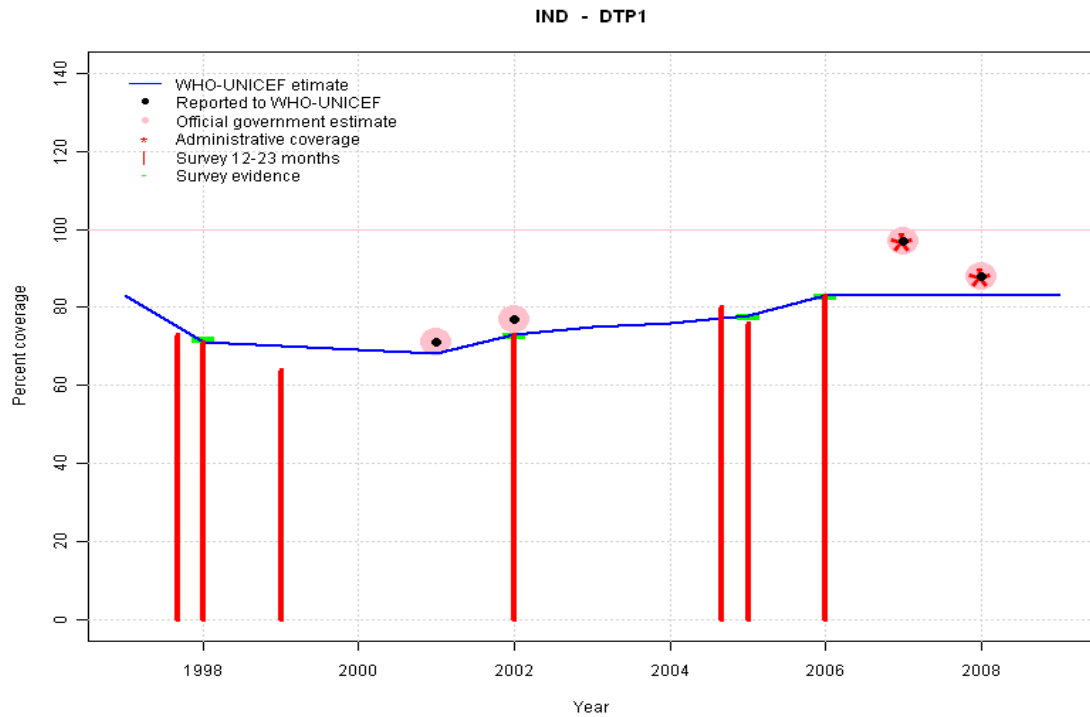
2006: Estimate is based on the survey data. 2006 reported data (101 percent) ignored; greater than 100 percent.

2007: Estimate extrapolated from 2006 level (87 percent). 2007 reported data (101 percent) ignored; greater than 100 percent.

2008: Estimate extrapolated from 2006 level (87 percent).

2009: Estimate extrapolated from 2006 level (87 percent).

India - DTP1



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	83	71	70	69	68	73	75	76	78	83	83	83	83
Reported	NA	NA	NA	NA	71	77	NA	NA	NA	NA	97	88	NA
Official	NA	NA	NA	NA	71	77	NA	NA	NA	NA	97	88	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	97	88	NA
Survey	NA	72	NA	NA	NA	73	NA	NA	78	83	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on interpolated value between reported data. Survey (72 percent) confirms trend in reported data. 2 surveys, results = 73, 71, mean = 72 percent.

1999: Reported data (71 percent) calibrated to 1998 and 2002 levels. Missing or ignored reported value estimated by extrapolation from 2001 reported value of 71 percent. Survey results of 64 percent with sample size 0 ignored; sample size less than 300.

2000: Reported data (71 percent) calibrated to 1998 and 2002 levels. Missing or ignored reported value estimated by extrapolation from 2001 reported value of 71 percent.

2001: Reported data (71 percent) calibrated to 1998 and 2002 levels.

2002:

2003: Reported data (81 percent) calibrated to 2002 and 2005 levels. Missing or ignored reported value estimated by interpolation between reported values of 77 percent in 2002 and 97 percent in 2007.

2004: Reported data (85 percent) calibrated to 2002 and 2005 levels. Missing or ignored reported value estimated by interpolation between reported values of 77 percent in 2002 and 97 percent in 2007. Nationally reported data are for 9 months only.

2005: Estimate based on survey results. Reported data (89 percent) not consistent with survey results (78 percent). 2 surveys, results = 80, 76, mean = 78 percent. Nationally reported data are for 9 months only.

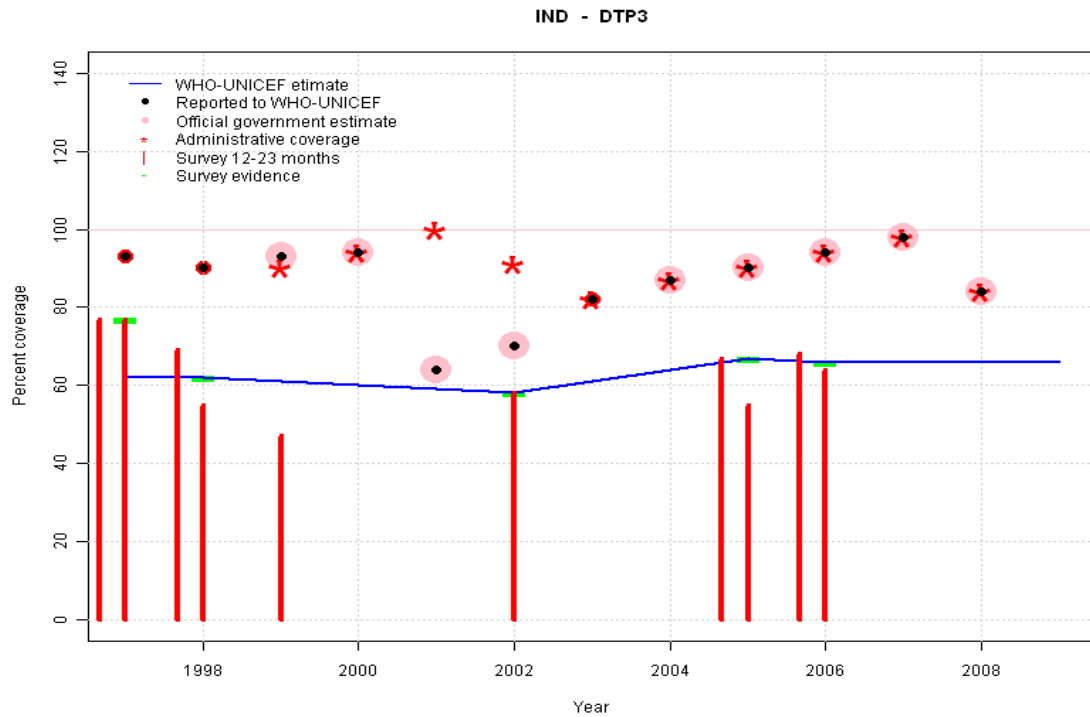
2006: Estimate is based on the survey data.

2007: Estimate extrapolated from 2006 level (83 percent).

2008: Estimate extrapolated from 2006 level (83 percent).

2009: Estimate extrapolated from 2006 level (83 percent).

India - DTP3

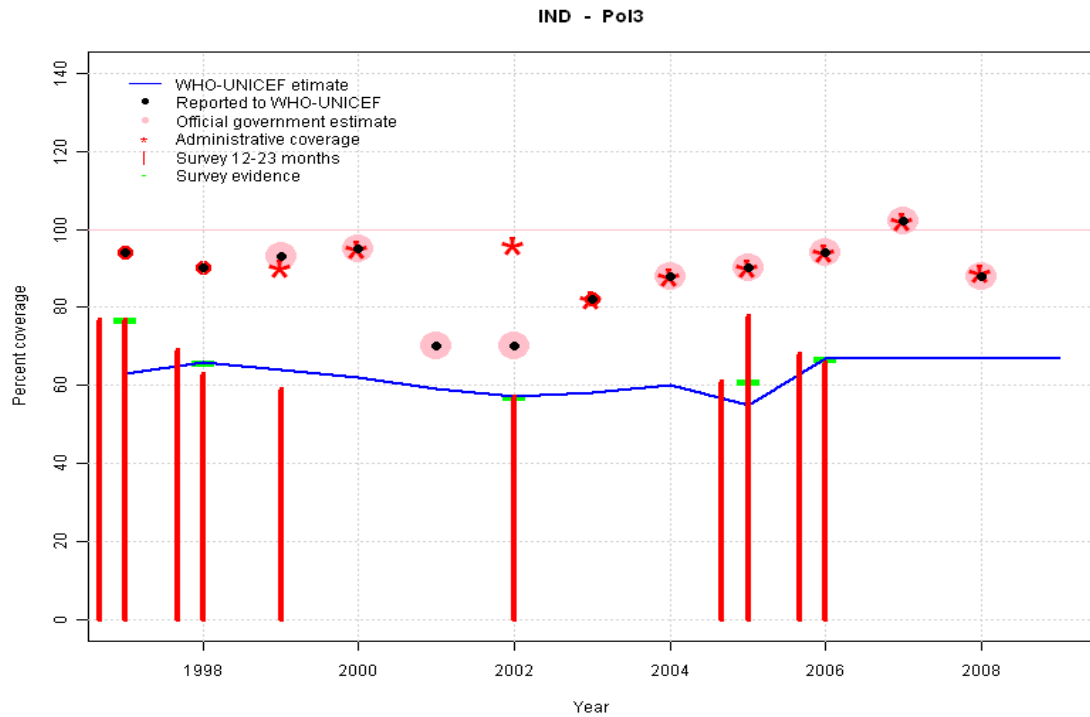


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	62	62	61	60	59	58	61	64	67	66	66	66	66
Reported	93	90	93	94	64	70	82	87	90	94	98	84	NA
Official	NA	NA	93	94	64	70	NA	87	90	94	98	84	NA
Administrative	NA	NA	90	94	100	91	82	87	90	94	98	84	NA
Survey	77	62	NA	NA	NA	58	NA	NA	67	66	NA	NA	NA

Description:

- 1997: Legacy estimate. Survey results of 77 percent with sample size 0 ignored; sample size less than 300.
- 1998: Estimate based on survey results. Reported data (90 percent) not consistent with survey results (62 percent). 2 surveys, results = 69, 55, mean = 62 percent.
- 1999: Estimate based on working group decision to interpolated between 1998 and 2002. Survey results of 47 percent with sample size 0 ignored; sample size less than 300.
- 2000: Estimate based on working group decision to interpolated between 1998 and 2002.
- 2001: Estimate based on working group decision to interpolated between 1998 and 2002.
- 2002: Estimate based on survey results. Reported data (70 percent) not consistent with survey results (58 percent).
- 2003: Estimate based on working group decision to interpolated between 2002 and 2005.
- 2004: Estimate based on working group decision to interpolated between 2002 and 2005. Nationally reported data are for 9 months only.
- 2005: Estimate based on survey results. Reported data (90 percent) not consistent with survey results (67 percent). 2 surveys, results = 67, 67, mean = 67 percent. Survey results (55 percent) adjusted for recall bias to 67 percent based on first dose card or history coverage (76 percent) and documented drop-out between first (98 percent) and third (87 percent) doses. Nationally reported data are for 9 months only.
- 2006: Estimate based on survey results. Reported data (94 percent) not consistent with survey results (66 percent). 2 surveys, results = 68, 64, mean = 66 percent.
- 2007: Estimate extrapolated from 2006 level (66 percent).
- 2008: Estimate extrapolated from 2006 level (66 percent). 2008 reported data (84 percent) inconsistent with data from other years.
- 2009: Estimate extrapolated from 2006 level (66 percent).

India - Pol3

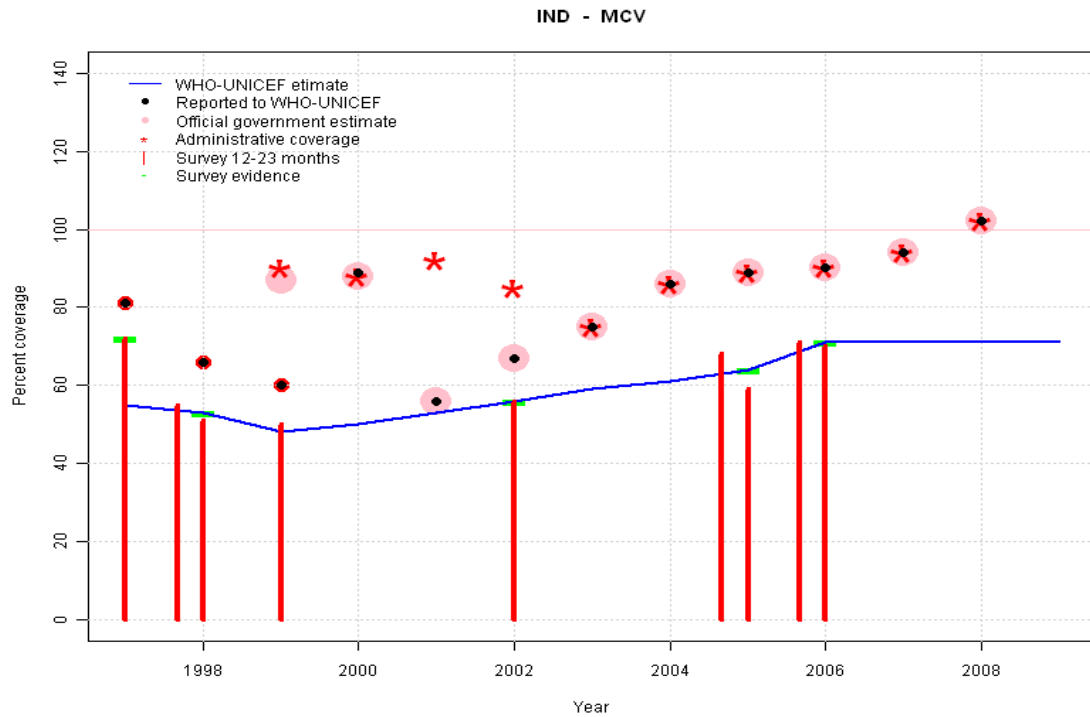


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	63	66	64	62	59	57	58	60	55	67	67	67	67
Reported	94	90	93	95	70	70	82	88	90	94	102	88	NA
Official	NA	NA	93	95	70	70	NA	88	90	94	102	88	NA
Administrative	NA	NA	90	95	NA	96	82	88	90	94	102	89	NA
Survey	77	66	NA	NA	NA	57	NA	NA	61	67	NA	NA	NA

Description:

- 1997: Legacy estimate. Survey results of 77 percent with sample size 0 ignored; sample size less than 300.
- 1998: Estimate based on survey results. Reported data (90 percent) not consistent with survey results (66 percent). 2 surveys, results = 69, 63, mean = 66 percent.
- 1999: Estimate based on working group decision to interpolated between 1998 and 2002. Survey results of 59 percent with sample size 0 ignored; sample size less than 300.
- 2000: Estimate based on working group decision to interpolated between 1998 and 2002.
- 2001: Estimate based on working group decision to interpolated between 1998 and 2002.
- 2002: Estimate based on survey results. Reported data (70 percent) not consistent with survey results (57 percent).
- 2003: Estimate based on working group decision to interpolated between 2002 and 2005.
- 2004: Estimate based on working group decision to interpolated between 2002 and 2005. Nationally reported data are for 9 months only.
- 2005: Estimate assigned by working group. Estimates are based on 2002/2004 National District and the 2005 CES adjusted with the difference between CES 2005 and NFHS DTP3 results. Survey results of 78 percent ignored by working group. The 2005 NFHS data include campaign doses. Nationally reported data are for 9 months only.
- 2006: Estimate based on survey results. Reported data (94 percent) not consistent with survey results (67 percent). 2 surveys, results = 68, 66, mean = 67 percent.
- 2007: Estimate extrapolated from 2006 level (67 percent). 2007 reported data (102 percent) ignored; greater than 100 percent.
- 2008: Estimate extrapolated from 2006 level (67 percent). 2008 reported data (88 percent) inconsistent with data from other years.
- 2009: Estimate extrapolated from 2006 level (67 percent).

India - MCV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	55	53	48	50	53	56	59	61	64	71	71	71	71
Reported	81	66	60	89	56	67	75	86	89	90	94	102	NA
Official	NA	NA	87	88	56	67	75	86	89	90	94	102	NA
Administrative	NA	NA	90	88	92	85	75	86	89	90	94	102	NA
Survey	72	53	NA	NA	NA	56	NA	NA	64	71	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on survey results. Reported data (66 percent) not consistent with survey results (53 percent). 2 surveys, results = 55, 51, mean = 53 percent.

1999: Reported data (60 percent) calibrated to 1998 and 2002 levels. Survey results of 50 percent with sample size 0 ignored; sample size less than 300.

2000: Reported data (62 percent) calibrated to 1998 and 2002 levels. Missing or ignored reported value estimated by interpolation between reported values of 60 percent in 1999 and 67 percent in 2002. 2000 reported data (89 percent) inconsistent with data from other years.

2001: Reported data (65 percent) calibrated to 1998 and 2002 levels. Missing or ignored reported value estimated by interpolation between reported values of 60 percent in 1999 and 67 percent in 2002. 2001 reported data (56 percent) inconsistent with data from other years.

2002: Estimate based on survey results. Reported data (67 percent) not consistent with survey results (56 percent).

2003: Estimate based on working group decision to interpolated between 2002 and 2005.

2004: Estimate based on working group decision to interpolated between 2002 and 2005. Nationally reported data are for 9 months only.

2005: Estimate based on survey results. Reported data (89 percent) not consistent with survey results (64 percent). 2 surveys, results = 68, 59, mean = 64 percent. Nationally reported data are for 9 months only.

2006: Estimate based on survey results. Reported data (90 percent) not consistent with survey results (71 percent). 2 surveys, results = 71, 70, mean = 71 percent.

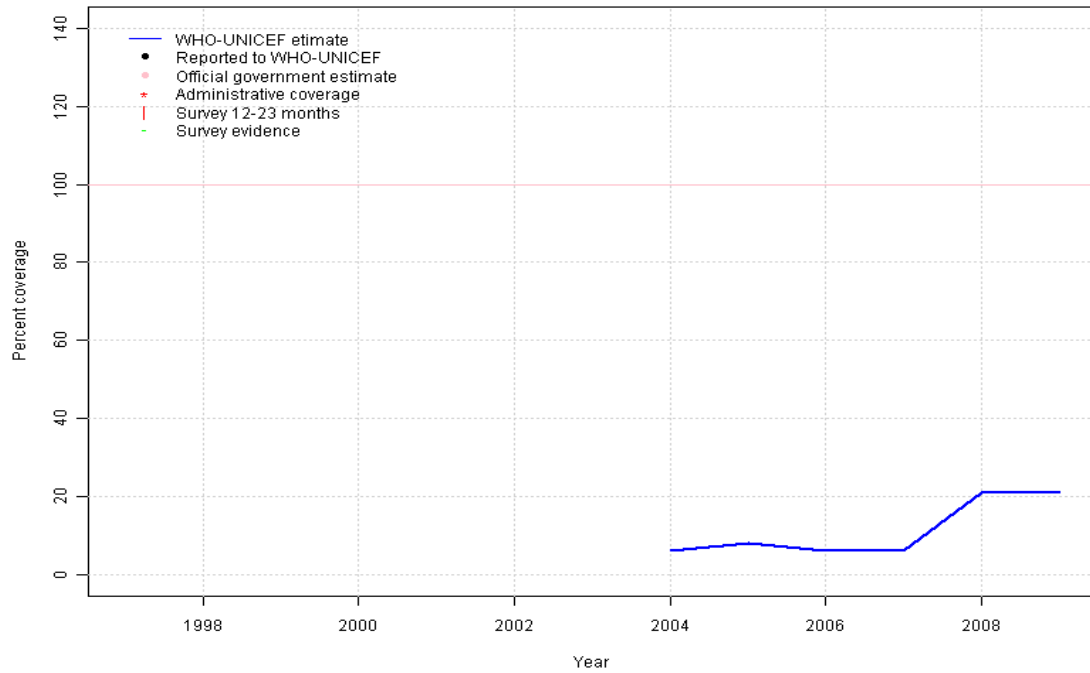
2007: Estimate extrapolated from 2006 level (71 percent).

2008: Estimate extrapolated from 2006 level (71 percent). 2008 reported data (102 percent) ignored; greater than 100 percent.

2009: Estimate extrapolated from 2006 level (71 percent).

India - HepB3

IND - HepB3

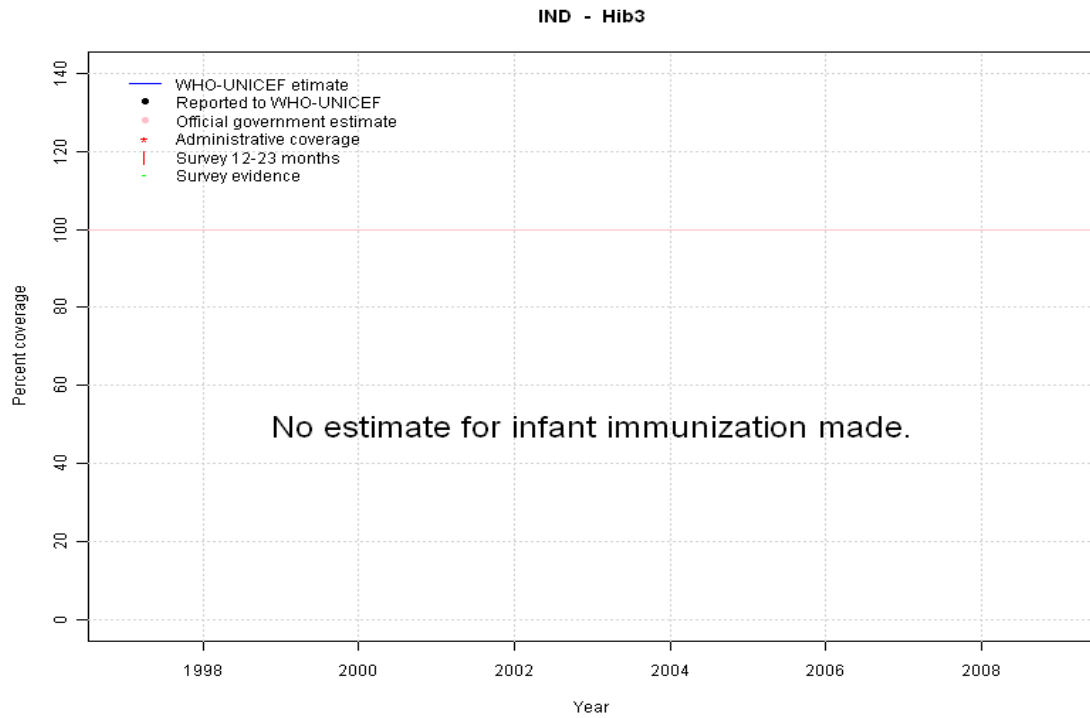


Description:

- 2004: Estimate assigned by working group. Sixty-eight percent coverage reached in 1.65 million children HepB partially introduced in 2002 reporting started in 2004. Vaccine presentation is HepB . Nationally reported data are for 9 months only.
- 2005: Estimate assigned by working group. Seventy-eight percent coverage reached in 2.3 million children Nationally reported data are for 9 months only.
- 2006: Estimate assigned by working group. Seventy-two percent coverage reached in 8 percent of the national target population
- 2007: Estimate assigned by working group. Sixty-nine percent coverage reached in 7 percent of the national target population
- 2008: Estimate assigned by working group. Fifty percent coverage reached in 43 percent of the national target population
- 2009: Estimate assigned by working group. No nationally reported data available. Estimate is based on the estimate from the preceding year.

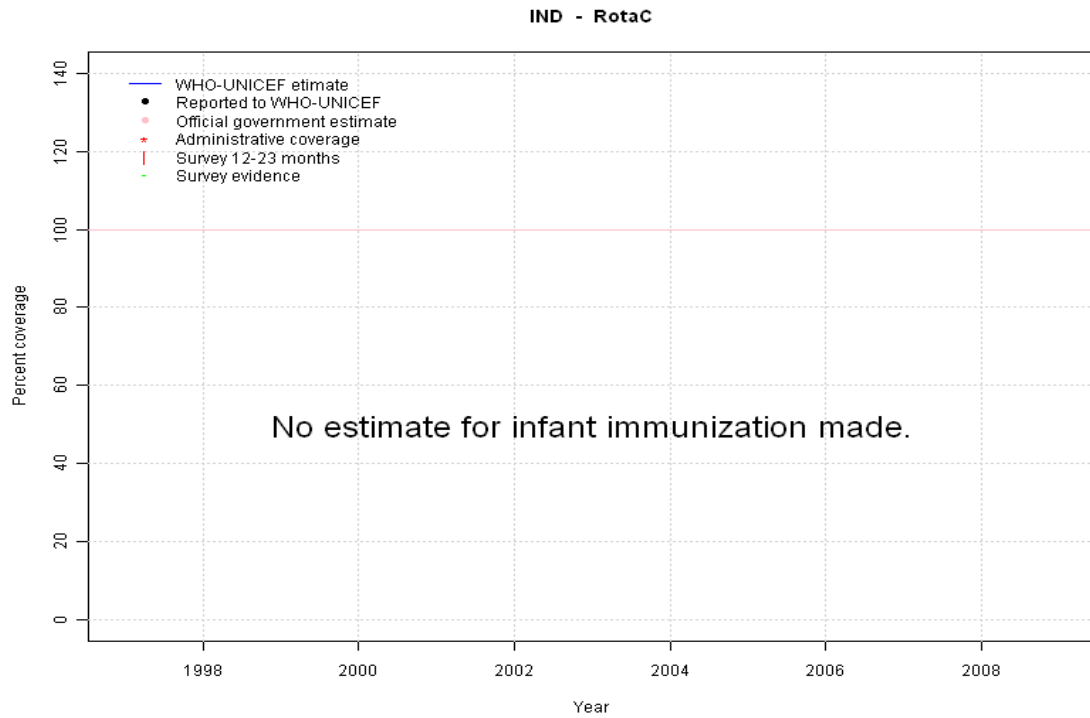
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	6	8	6	6	21	21
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

India - Hib3



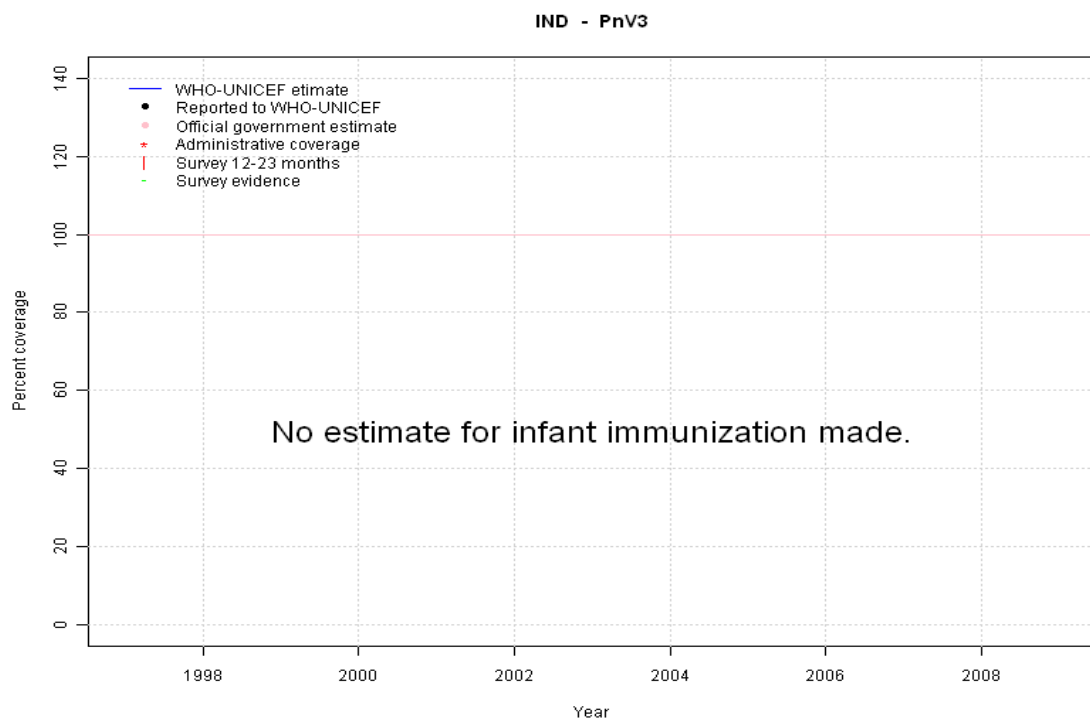
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

India - RotaC



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

India - PnV3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

India - survey details

2006 India Coverage Evaluation Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	87	12-23 m	22888	0
DTP1	Card or History	83	12-23 m	22888	0
DTP3	Card or History	68	12-23 m	22888	0
MCV	Card or History	71	12-23 m	22888	0
Pol1	Card or History	82	12-23 m	22888	0
Pol3	Card or History	68	12-23 m	22888	0

2006 India District-Level Household and Facility Survey 2007-2008 (DHLS-3), Factsheet

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	87	12-23 m	64702	0
DTP3	Card or History	64	12-23 m	64702	0
MCV	Card or History	70	12-23 m	64702	0
Pol3	Card or History	66	12-23 m	64702	0

2005 India Coverage Evaluation Survey 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	83	12-23 m	15676	0
DTP1	Card or History	80	12-23 m	15676	0
DTP3	Card or History	67	12-23 m	15676	0
MCV	Card or History	68	12-23 m	15676	0
Pol1	Card or History	79	12-23 m	15676	0
Pol3	Card or History	61	12-23 m	15676	0

2005 India National Family Health Survey (NFHS-3) 2005-2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	76	12-23 m	10419	38
BCG	Card	97	12-23 m	10419	38

BCG	Card or History	78	12-23 m	10419	38
BCG	History	67	12-23 m	10419	38
DTP1	History	62	12-23 m	10419	38
DTP1	Card or History	76	12-23 m	10419	38
DTP1	C or H <12 months	73	12-23 m	10419	38
DTP1	Card	98	12-23 m	10419	38
DTP3	Card or History	55	12-23 m	10419	38
DTP3	C or H <12 months	52	12-23 m	10419	38
DTP3	History	36	12-23 m	10419	38
DTP3	Card	87	12-23 m	10419	38
MCV	C or H <12 months	48	12-23 m	10419	38
MCV	Card	81	12-23 m	10419	38
MCV	Card or History	59	12-23 m	10419	38
MCV	History	45	12-23 m	10419	38
Pol1	C or H <12 months	89	12-23 m	10419	38
Pol1	Card	98	12-23 m	10419	38
Pol1	Card or History	93	12-23 m	10419	38
Pol1	History	90	12-23 m	10419	38
Pol3	C or H <12 months	73	12-23 m	10419	38
Pol3	History	73	12-23 m	10419	38
Pol3	Card	87	12-23 m	10419	38
Pol3	Card or History	78	12-23 m	10419	38

2002 Reproductive and Child Health (District Level Household Survey 2002-2004) - India

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	75	12-23 m	62505	31
DTP1	Card or History	73	12-23 m	62505	31
DTP3	Card or History	58	12-23 m	62505	31
MCV	Card or History	56	12-23 m	62505	31
Pol3	Card or History	57	12-23 m	62505	31

2001 Routine Immunization and Maternal Care, CES, 2002

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	74	12-23 m	0	54

India - survey details

DTP1	C or H <12 months	71	12-23 m	0	54
DTP3	C or H <12 months	64	12-23 m	0	54
MCV	C or H <12 months	61	12-23 m	0	54
Pol3	C or H <12 months	68	12-23 m	0	54

2000 Routine Immunization and Maternal Care, CES, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	73	12-23 m	0	57
DTP1	C or H <12 months	71	12-23 m	0	57
DTP3	C or H <12 months	64	12-23 m	0	57
MCV	C or H <12 months	56	12-23 m	0	57
Pol3	C or H <12 months	70	12-23 m	0	57

1999 India, Multiple Indicator Cluster Survey India (MICS-II) 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	68	12-23 m	0	0
DTP1	Card or History	64	12-23 m	0	0
DTP3	Card or History	47	12-23 m	0	0
MCV	Card or History	50	12-23 m	0	0
Pol1	Card or History	70	12-23 m	0	0
Pol3	Card or History	59	12-23 m	0	0

1998 Evaluation of Routine Immunization 1998-99

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	72	12-23 m	7855	48
DTP1	Card or History	73	12-23 m	7855	48
DTP3	Card or History	69	12-23 m	7855	48
MCV	Card or History	55	12-23 m	7855	48
Pol1	Card or History	73	12-23 m	7855	48
Pol3	Card or History	69	12-23 m	7855	48

1998 National Family Health Survey, India 1998-99

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	95	12-23 m	3393	34
BCG	Card or History	72	12-23 m	10076	34
BCG	History	60	12-23 m	6684	34
BCG	C or H <12 months	69	12-23 m	10076	34
BCG	C or H <12 months	65	24-35 m	9813	24
DTP1	C or H <12 months	69	12-23 m	10076	34
DTP1	Card	99	12-23 m	3393	34
DTP1	Card or History	71	12-23 m	10076	34
DTP1	History	58	12-23 m	6684	34
DTP1	C or H <12 months	64	24-35 m	9813	24
DTP3	Card or History	55	12-23 m	10076	34
DTP3	C or H <12 months	52	12-23 m	10076	34
DTP3	History	40	12-23 m	6684	34
DTP3	Card	86	12-23 m	3393	34
DTP3	C or H <12 months	50	24-35 m	9813	24
MCV	C or H <12 months	42	12-23 m	10076	34
MCV	Card	73	12-23 m	3393	34
MCV	Card or History	51	12-23 m	10076	34
MCV	History	39	12-23 m	6684	34
MCV	C or H <12 months	41	24-35 m	9813	24
Pol1	Card or History	84	12-23 m	10076	34
Pol1	History	76	12-23 m	6684	34
Pol1	Card	98	12-23 m	3393	34
Pol1	C or H <12 months	80	12-23 m	10076	34
Pol1	C or H <12 months	76	24-35 m	9813	24
Pol3	Card	85	12-23 m	3393	34
Pol3	Card or History	63	12-23 m	10076	34
Pol3	History	51	12-23 m	6684	34
Pol3	C or H <12 months	59	12-23 m	10076	34
Pol3	C or H <12 months	60	24-35 m	9813	24

1997 Evaluation of Routine Immunization 1997-98

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	81	24-35 m	2673	0
DTP3	Card or History	77	24-35 m	2673	0

India - survey details

MCV	Card or History	72	24-35 m	2673	0
Pol3	Card or History	77	24-35 m	2673	0

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP3	Card or History	77	12-23 m	0	0
Pol3	Card or History	77	12-23 m	0	0

1997 Evaluation of Routine Immunization 1998-99

Further information and estimates for 1980-1996 are available at:

http://www.childinfo.org/immunization_countryreports.html

http://www.who.int/immunization_monitoring/routine/immunization_coverage/en/index4.html

India

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.

Year	PAB coverage estimate (%)
1997	84
1998	84
1999	85
2000	85
2001	83
2002	87
2003	86
2004	86
2005	86
2006	86
2007	86
2008	86
2009	86

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.