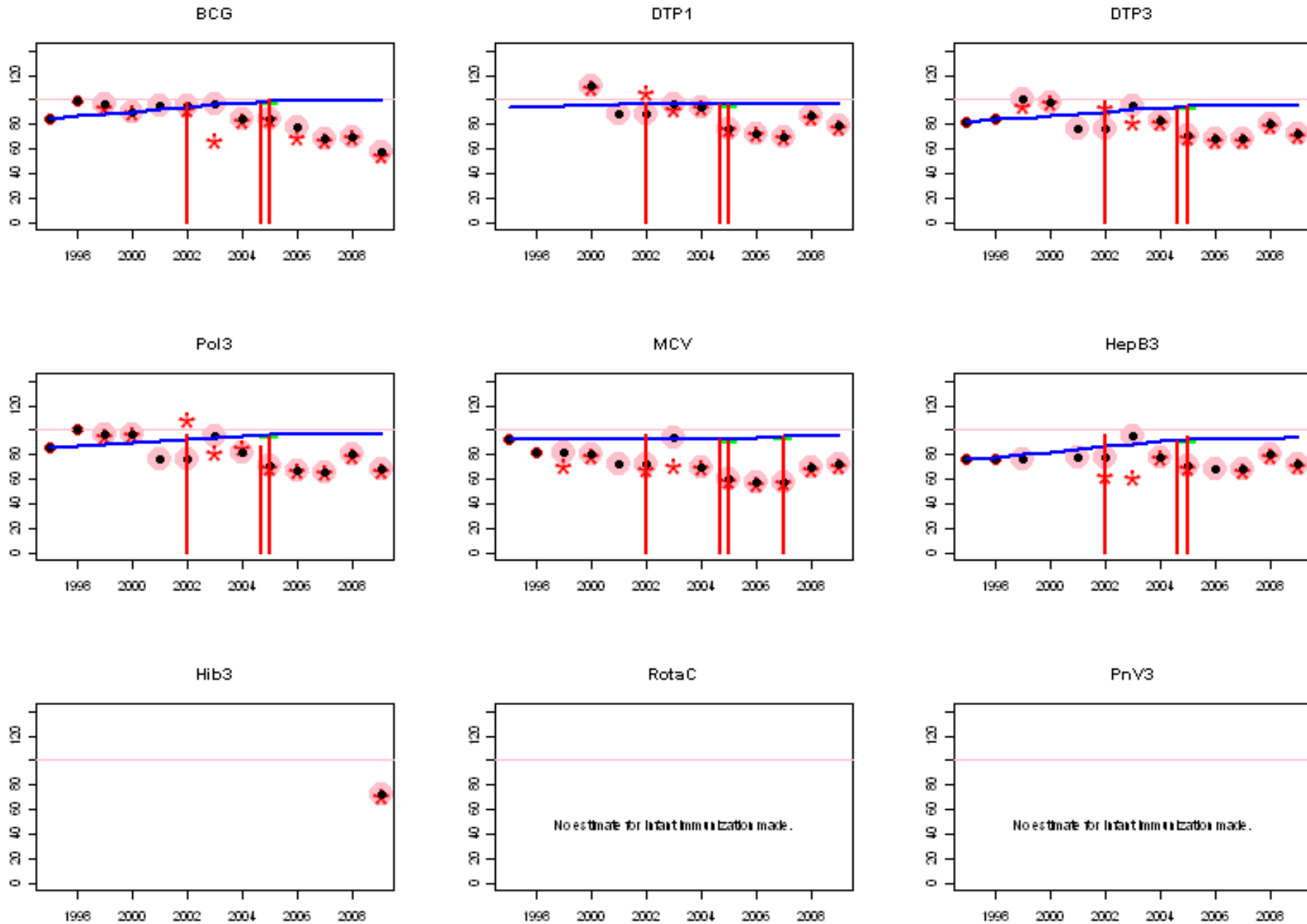
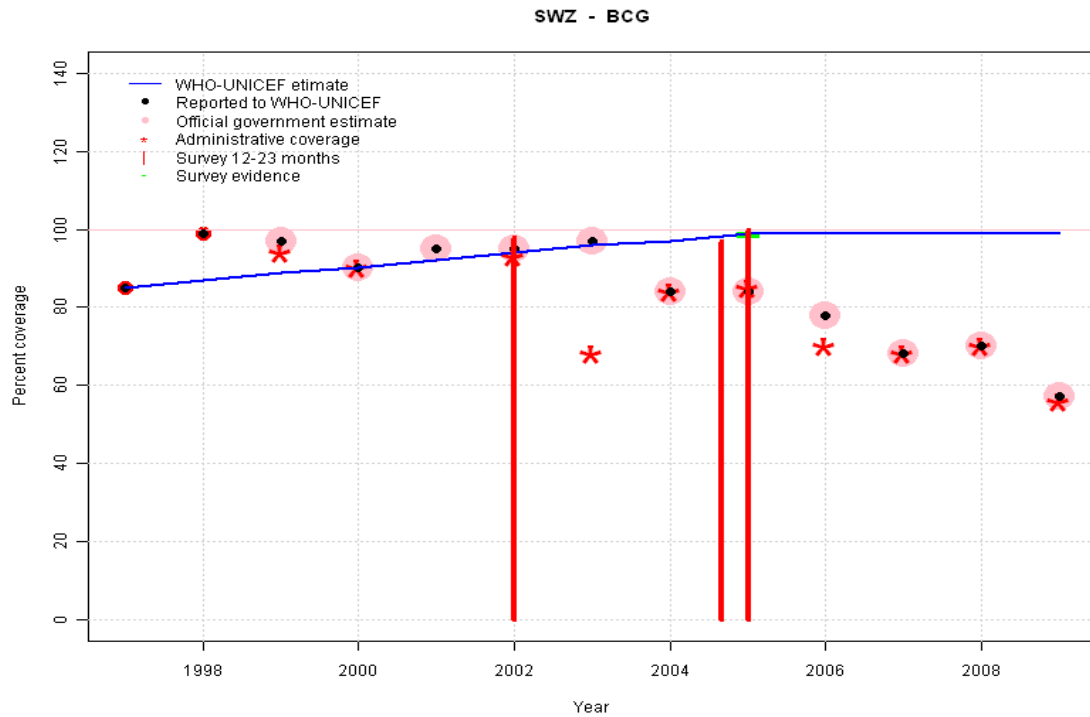


Swaziland: WHO and UNICEF estimates of immunization coverage, 1997 - 2009



Swaziland - BCG



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	85	87	89	90	92	94	96	97	99	99	99	99	99
Reported	85	99	97	90	95	95	97	84	84	78	68	70	57
Official	NA	NA	97	90	95	95	97	84	84	78	68	70	57
Administrative	NA	NA	94	90	NA	93	68	84	85	70	68	70	56
Survey	NA	NA	NA	NA	NA	NA	NA	NA	99	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate interpolated between 1997 and 2005 estimates.

1999: Estimate interpolated between 1997 and 2005 estimates.

2000: Estimate interpolated between 1997 and 2005 estimates.

2001: Estimate interpolated between 1997 and 2005 estimates.

2002: Estimate interpolated between 1997 and 2005 estimates. Survey results of 98 percent with sample size 209 ignored; sample size less than 300.

2003: Estimate interpolated between 1997 and 2005 estimates.

2004: Estimate interpolated between 1997 and 2005 estimates.

2005: Estimate based on survey results. Reported data (84 percent) not consistent with survey results (99 percent). 2 surveys, results = 97, 100, mean = 99 percent.

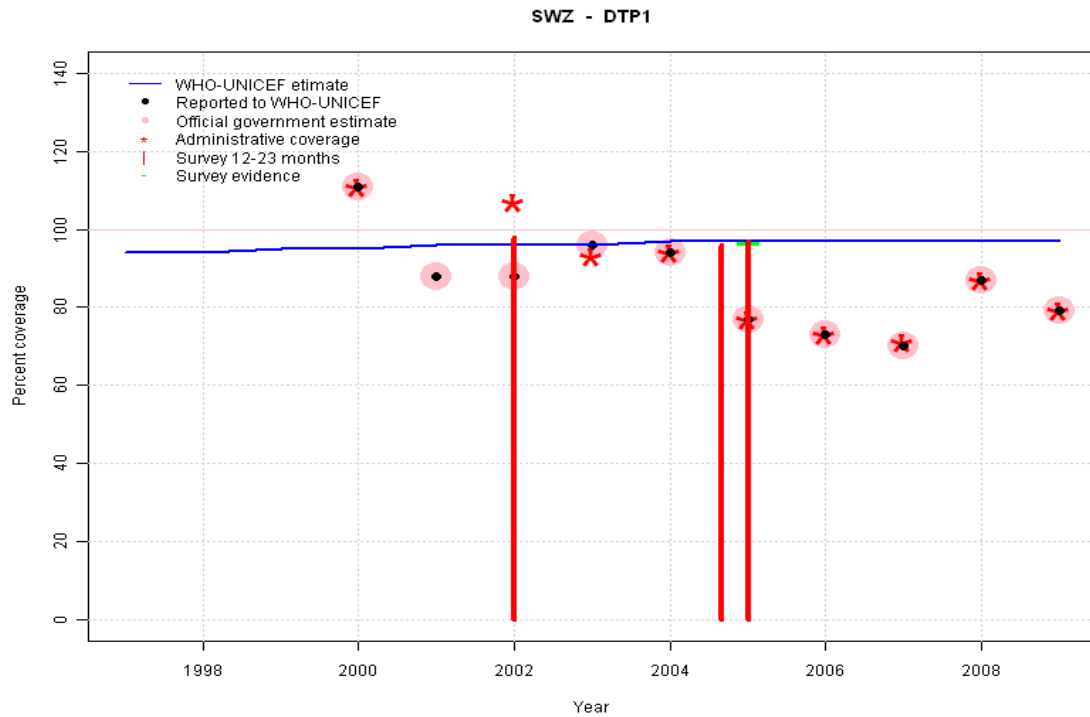
2006: Estimate extrapolated from 2005 level (99 percent).

2007: Estimate extrapolated from 2005 level (99 percent).

2008: Estimate extrapolated from 2005 level (99 percent).

2009: Estimate extrapolated from 2005 level (99 percent). 2009 reported data (57 percent) inconsistent with data from other years. WHO and UNICEF estimates are based on 2005 survey results. WHO and UNICEF recommend a high quality survey to confirm reported levels of coverage. Estimates of target population sizes vary between 2005, 2005, 2007, 2008.

Swaziland - DTP1

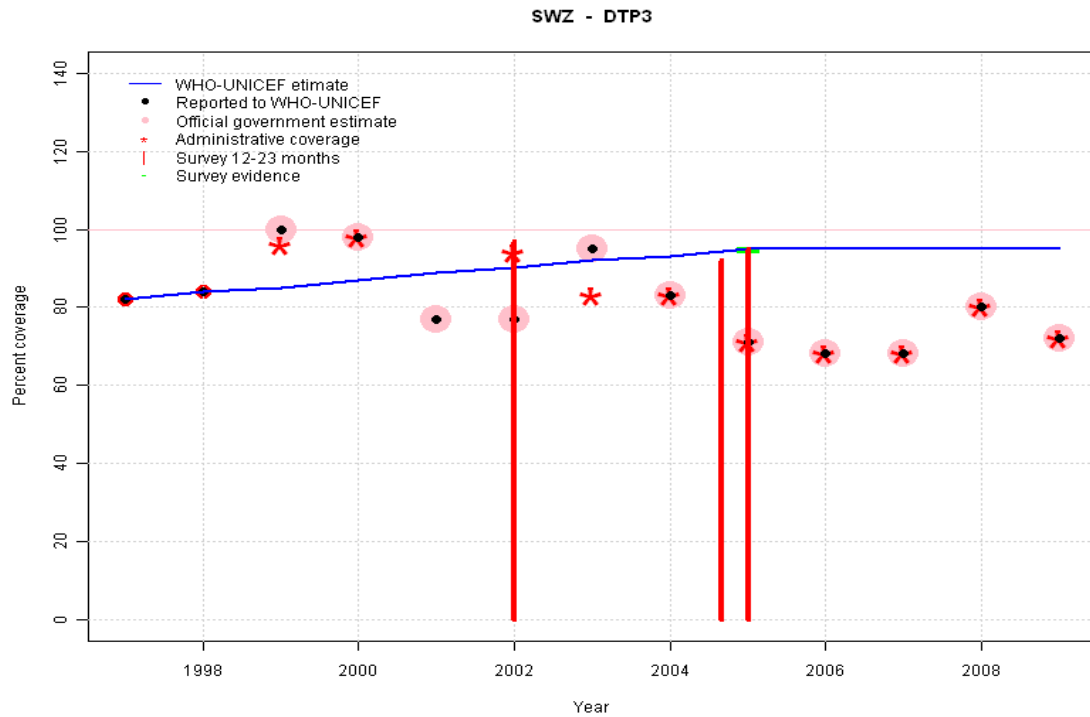


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	94	94	95	95	96	96	96	97	97	97	97	97	97
Reported	NA	NA	NA	111	88	88	96	94	77	73	70	87	79
Official	NA	NA	NA	111	88	88	96	94	77	73	70	87	79
Administrative	NA	NA	NA	111	NA	107	93	94	77	73	71	87	79
Survey	NA	NA	NA	NA	NA	NA	NA	NA	97	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 2005 estimates.
- 1999: Estimate interpolated between 1997 and 2005 estimates.
- 2000: Estimate interpolated between 1997 and 2005 estimates. 2000 reported data (111 percent) ignored; greater than 100 percent.
- 2001: Estimate interpolated between 1997 and 2005 estimates.
- 2002: Estimate interpolated between 1997 and 2005 estimates. Survey results of 98 percent with sample size 209 ignored; sample size less than 300.
- 2003: Estimate interpolated between 1997 and 2005 estimates.
- 2004: Estimate interpolated between 1997 and 2005 estimates.
- 2005: Estimate based on survey results. Reported data (77 percent) not consistent with survey results (97 percent). 2 surveys, results = 96, 97, mean = 97 percent.
- 2006: Estimate extrapolated from 2005 level (97 percent).
- 2007: Estimate extrapolated from 2005 level (97 percent).
- 2008: Estimate extrapolated from 2005 level (97 percent).
- 2009: Estimate extrapolated from 2005 level (97 percent). WHO and UNICEF estimates are based on 2005 survey results. WHO and UNICEF recommend a high quality survey to confirm reported levels of coverage. Estimates of target population sizes vary between 2005, 2005, 2007, 2008.

Swaziland - DTP3

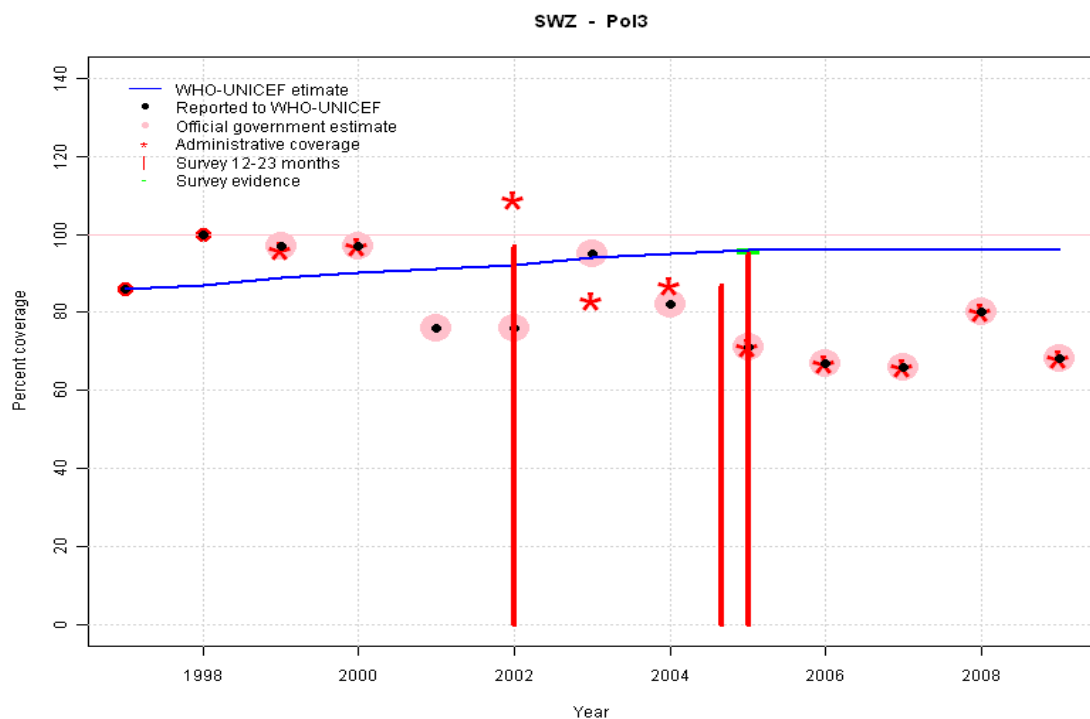


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	82	84	85	87	89	90	92	93	95	95	95	95	95
Reported	82	84	100	98	77	77	95	83	71	68	68	80	72
Official	NA	NA	100	98	77	77	95	83	71	68	68	80	72
Administrative	NA	NA	96	98	NA	94	83	83	71	68	68	80	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	95	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 2005 estimates.
- 1999: Estimate interpolated between 1997 and 2005 estimates.
- 2000: Estimate interpolated between 1997 and 2005 estimates.
- 2001: Estimate interpolated between 1997 and 2005 estimates.
- 2002: Estimate interpolated between 1997 and 2005 estimates. Survey results of 97 percent with sample size 209 ignored; sample size less than 300.
- 2003: Estimate interpolated between 1997 and 2005 estimates. 2003 reported data (95 percent) inconsistent with data from other years.
- 2004: Estimate interpolated between 1997 and 2005 estimates.
- 2005: Estimate based on survey results. Reported data (71 percent) not consistent with survey results (95 percent). 2 surveys, results = 94, 95, mean = 95 percent. Survey results (92 percent) adjusted for recall bias to 94 percent based on first dose card or history coverage (96 percent) and documented drop-out between first (84 percent) and third (82 percent) doses. Survey results (95 percent) adjusted for recall bias to 95 percent based on first dose card or history coverage (97 percent) and documented drop-out between first (98 percent) and third (96 percent) doses.
- 2006: Estimate extrapolated from 2005 level (95 percent).
- 2007: Estimate extrapolated from 2005 level (95 percent).
- 2008: Estimate extrapolated from 2005 level (95 percent).
- 2009: Estimate extrapolated from 2005 level (95 percent). WHO and UNICEF estimates are based on 2005 survey results. WHO and UNICEF recommend a high quality survey to confirm reported levels of coverage. Estimates of target population sizes vary between 2005, 2005, 2007, 2008.

Swaziland - Pol3

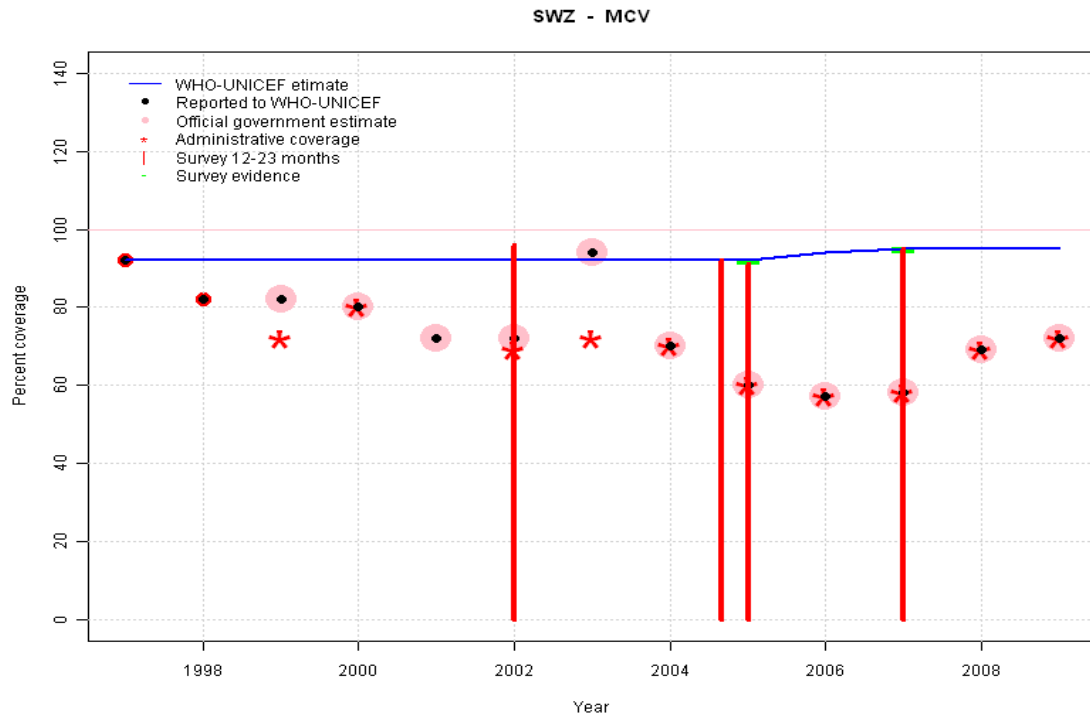


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	86	87	89	90	91	92	94	95	96	96	96	96	96
Reported	86	100	97	97	76	76	95	82	71	67	66	80	68
Official	NA	NA	97	97	76	76	95	82	71	67	66	80	68
Administrative	NA	NA	96	97	NA	109	83	87	71	67	66	80	68
Survey	NA	NA	NA	NA	NA	NA	NA	NA	96	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 2005 estimates.
- 1999: Estimate interpolated between 1997 and 2005 estimates.
- 2000: Estimate interpolated between 1997 and 2005 estimates.
- 2001: Estimate interpolated between 1997 and 2005 estimates.
- 2002: Estimate interpolated between 1997 and 2005 estimates. Survey results of 97 percent with sample size 209 ignored; sample size less than 300.
- 2003: Estimate interpolated between 1997 and 2005 estimates. 2003 reported data (95 percent) inconsistent with data from other years.
- 2004: Estimate interpolated between 1997 and 2005 estimates.
- 2005: Estimate based on survey results. Reported data (71 percent) not consistent with survey results (96 percent). 2 surveys, results = 96, 96, mean = 96 percent. Survey results (87 percent) adjusted for recall bias to 96 percent based on first dose card or history coverage (97 percent) and documented drop-out between first (84 percent) and third (83 percent) doses. Survey results (95 percent) adjusted for recall bias to 96 percent based on first dose card or history coverage (97 percent) and documented drop-out between first (97 percent) and third (96 percent) doses.
- 2006: Estimate extrapolated from 2005 level (96 percent).
- 2007: Estimate extrapolated from 2005 level (96 percent).
- 2008: Estimate extrapolated from 2005 level (96 percent). 2008 reported data (80 percent) inconsistent with data from other years.
- 2009: Estimate extrapolated from 2005 level (96 percent). 2009 reported data (68 percent) inconsistent with data from other years. WHO and UNICEF estimates are based on 2005 survey results. WHO and UNICEF recommend a high quality survey to confirm reported levels of coverage. Estimates of target population sizes vary between 2005, 2005, 2007, 2008.

Swaziland - MCV

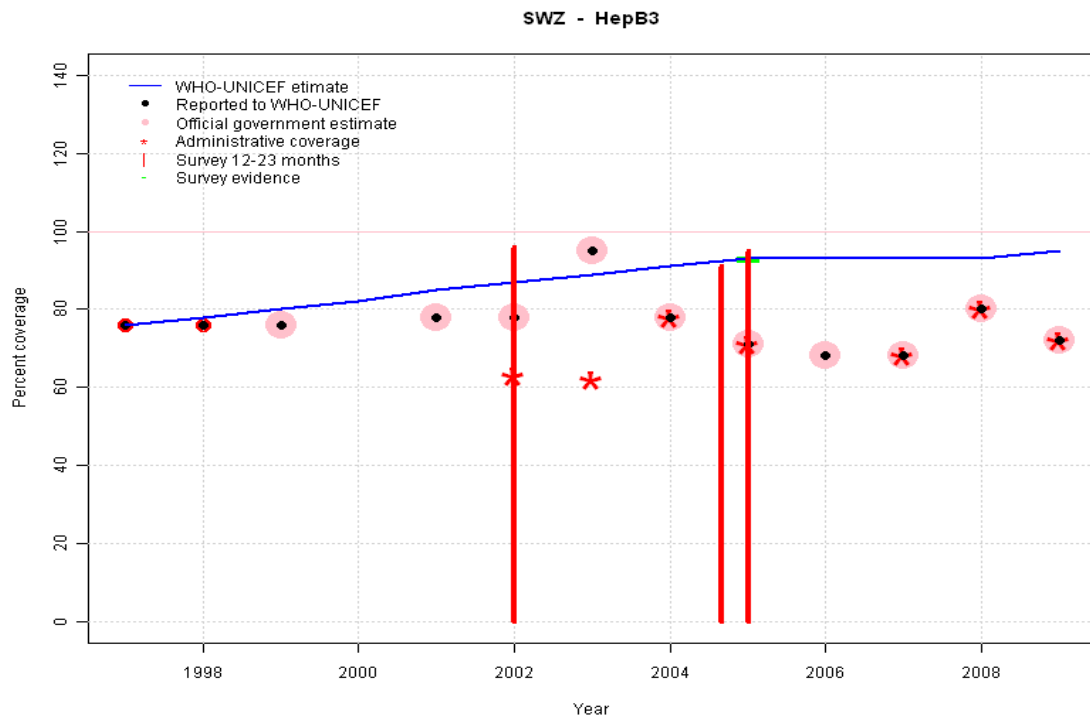


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	92	92	92	92	92	92	92	92	92	94	95	95	95
Reported	92	82	82	80	72	72	94	70	60	57	58	69	72
Official	NA	NA	82	80	72	72	94	70	60	57	58	69	72
Administrative	NA	NA	72	80	NA	69	72	70	60	57	58	69	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	92	NA	95	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 2005 estimates.
- 1999: Estimate interpolated between 1997 and 2005 estimates.
- 2000: Estimate interpolated between 1997 and 2005 estimates.
- 2001: Estimate interpolated between 1997 and 2005 estimates.
- 2002: Estimate interpolated between 1997 and 2005 estimates. Survey results of 96 percent with sample size 209 ignored; sample size less than 300.
- 2003: Estimate interpolated between 1997 and 2005 estimates. 2003 reported data (94 percent) inconsistent with data from other years.
- 2004: Estimate interpolated between 1997 and 2005 estimates.
- 2005: Estimate based on survey results. Reported data (60 percent) not consistent with survey results (92 percent). 2 surveys, results = 92, 91, mean = 92 percent.
- 2006: Estimate interpolated between 2005 and 2007 estimates.
- 2007: Estimate based on survey results. Reported data (58 percent) not consistent with survey results (95 percent).
- 2008: Estimate extrapolated from 2007 level (95 percent).
- 2009: Estimate extrapolated from 2007 level (95 percent). WHO and UNICEF estimates are based on 2005 survey results. WHO and UNICEF recommend a high quality survey to confirm reported levels of coverage. Estimates of target population sizes vary between 2005, 2005, 2007, 2008.

Swaziland - HepB3



Description:

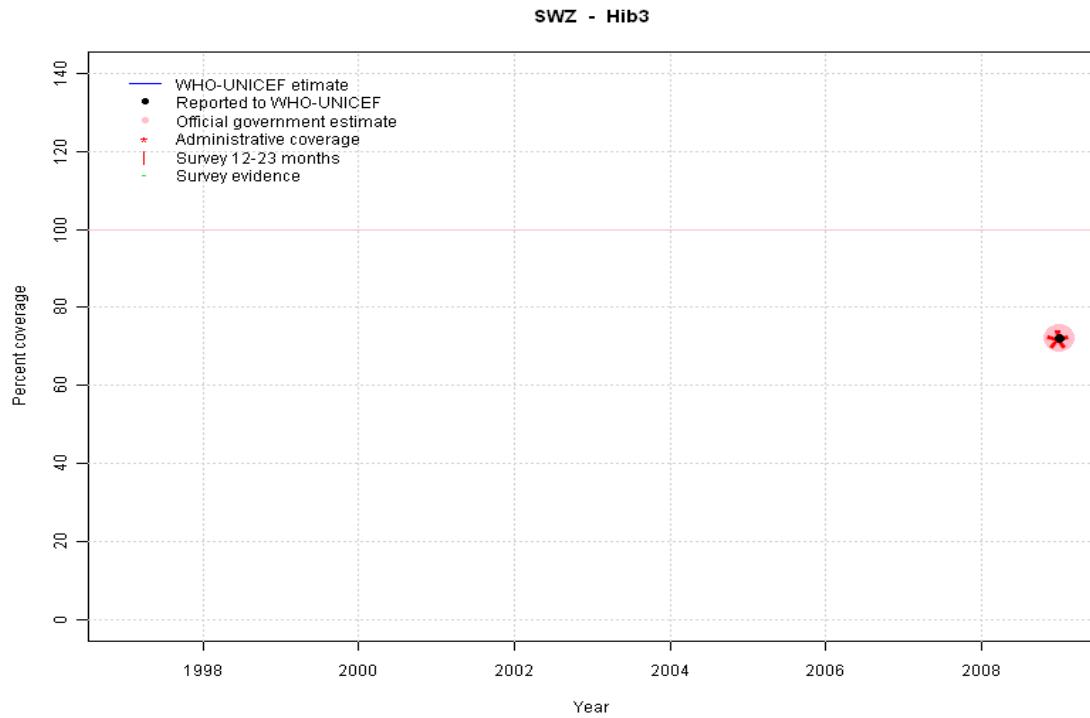
- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 2005 estimates.
- 1999: Estimate interpolated between 1997 and 2005 estimates.
- 2000: Estimate interpolated between 1997 and 2005 estimates.
- 2001: Estimate interpolated between 1997 and 2005 estimates.
- 2002: Estimate interpolated between 1997 and 2005 estimates. Survey results of 96 percent with sample size 209 ignored; sample size less than 300.
- 2003: Estimate interpolated between 1997 and 2005 estimates. 2003 reported data (95 percent) inconsistent with data from other years.
- 2004: Estimate interpolated between 1997 and 2005 estimates.
- 2005: Estimate based on survey results. Reported data (71 percent) not consistent with survey results (93 percent). 2 surveys, results = 91, 95, mean = 93 percent.
- 2006: Estimate interpolated between 2005 and 2008 estimates.
- 2007: Estimate interpolated between 2005 and 2008 estimates.
- 2008:
- 2009: DTP-HepB-Hib vaccine in 2009. Estimate set to DTP3 levels. WHO and UNICEF estimates are based on 2005 survey results. WHO and UNICEF recommend a high quality survey to confirm reported levels of coverage. Estimates of target population sizes vary between 2005, 2005, 2007,2008.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	76	78	80	82	85	87	89	91	93	93	93	93	95
Reported	76	76	76	NA	78	78	95	78	71	68	68	80	72
Official	NA	NA	76	NA	78	78	95	78	71	68	68	80	72
Administrative	NA	NA	NA	NA	NA	63	62	78	71	NA	68	80	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	93	NA	NA	NA	NA

Swaziland - Hib3

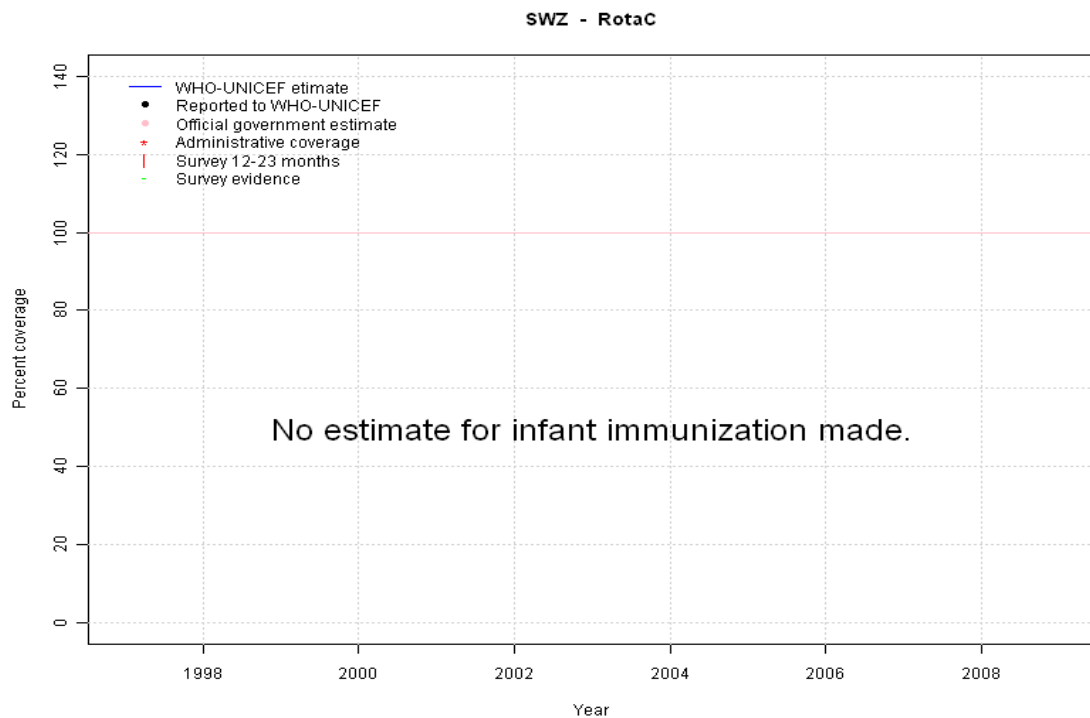
Description:

2009: DTP-HepB-Hib vaccine in 2009. Estimate set to DTP3 levels. WHO and UNICEF estimates are based on 2005 survey results. WHO and UNICEF recommend a high quality survey to confirm reported levels of coverage. Estimates of target population sizes vary between 2005, 2005, 2007,2008.



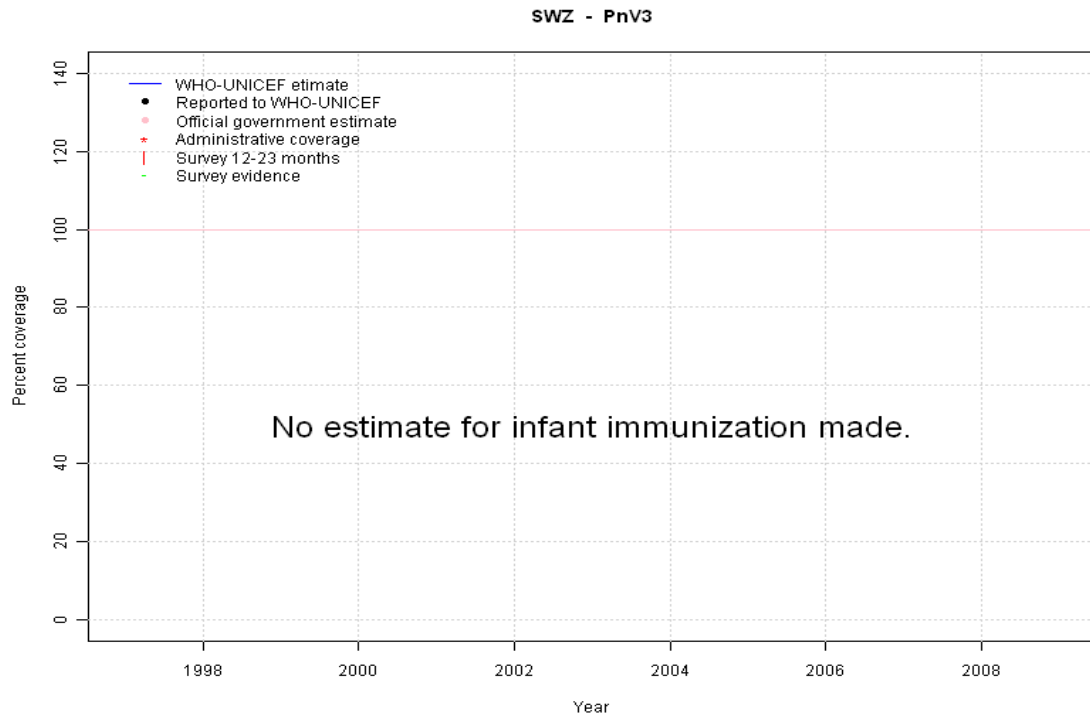
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	95
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	72
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	72
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Swaziland - 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

Swaziland - 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

Swaziland - survey details

2007 Swaziland 2008 National Nutrition Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV	History	11	12-23 m	754	0
MCV	Card or History	95	12-23 m	754	0
MCV	Card	84	12-23 m	754	0
MCV	Card <12 months	64	9-11 m	0	0
MCV	C or H <12 months	72	9-11 m	0	0
MCV	History <12 months	8	9-11 m	0	0

2005 Swaziland Demographic and Health Survey 2006-07

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	84	12-23 m	531	84
BCG	Card or History	97	12-23 m	531	84
BCG	C or H <12 months	97	12-23 m	531	84
BCG	History	13	12-23 m	531	84
DTP1	History	12	12-23 m	531	84
DTP1	C or H <12 months	95	12-23 m	531	84
DTP1	Card	84	12-23 m	531	84
DTP1	Card or History	96	12-23 m	531	84
DTP3	Card or History	92	12-23 m	531	84
DTP3	History	9	12-23 m	531	84
DTP3	C or H <12 months	90	12-23 m	531	84
DTP3	Card	82	12-23 m	531	84
HepB1	C or H <12 months	95	12-23 m	531	84
HepB1	Card	83	12-23 m	531	84
HepB1	Card or History	96	12-23 m	531	84
HepB1	History	12	12-23 m	531	84
HepB3	C or H <12 months	90	12-23 m	531	84
HepB3	Card	82	12-23 m	531	84
HepB3	Card or History	91	12-23 m	531	84
HepB3	History	9	12-23 m	531	84
MCV	History	12	12-23 m	531	84
MCV	Card	79	12-23 m	531	84
MCV	Card or History	92	12-23 m	531	84
MCV	C or H <12 months	83	12-23 m	531	84
Pol1	Card	84	12-23 m	531	84

Pol1	Card or History	97	12-23 m	531	84
Pol1	History	13	12-23 m	531	84
Pol1	C or H <12 months	96	12-23 m	531	84
Pol3	History	4	12-23 m	531	84
Pol3	C or H <12 months	86	12-23 m	531	84
Pol3	Card	83	12-23 m	531	84
Pol3	Card or History	87	12-23 m	531	84

2005 Swaziland measles post campaigning evaluation and EPI coverage survey reports, July 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	100	12-23 m	581	79
BCG	Card or History	100	12-23 m	581	79
DTP1	Card	98	12-23 m	581	79
DTP1	Card or History	97	12-23 m	581	79
DTP3	Card	96	12-23 m	581	79
DTP3	Card or History	95	12-23 m	581	79
HepB1	Card	98	12-23 m	581	79
HepB1	Card or History	97	12-23 m	581	79
HepB3	Card	96	12-23 m	581	79
HepB3	Card or History	95	12-23 m	581	79
MCV	Card or History	91	12-23 m	581	79
MCV	Card	89	12-23 m	581	79
Pol1	Card	97	12-23 m	581	79
Pol1	Card or History	97	12-23 m	581	79
Pol3	Card	96	12-23 m	581	79
Pol3	Card or History	95	12-23 m	581	79

2002 Swaziland, Report on National EPI Review, 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	98	12-23 m	209	94
DTP1	Card or History	98	12-23 m	209	94
DTP3	Card or History	97	12-23 m	209	94
HepB3	Card or History	96	12-23 m	209	94
MCV	Card or History	96	12-23 m	209	94

Swaziland - survey details

Pol3 Card or History 97 12-23 m 209 94

1999 Swaziland Multiple Indicator Cluster Survey 2000, 2002

Vaccine Confirmation method Coverage Age cohort Sample Cards seen

BCG	C or H <12 months	94	12-23 m	0	86
DTP1	C or H <12 months	93	12-23 m	0	86
DTP3	C or H <12 months	78	12-23 m	0	86
MCV	C or H <12 months	72	12-23 m	0	86
Pol1	C or H <12 months	91	12-23 m	0	86
Pol3	C or H <12 months	75	12-23 m	0	86

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

Swaziland

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	80
1998	79
1999	79
2000	80
2001	80
2002	81
2003	81
2004	82
2005	82
2006	85
2007	85
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.