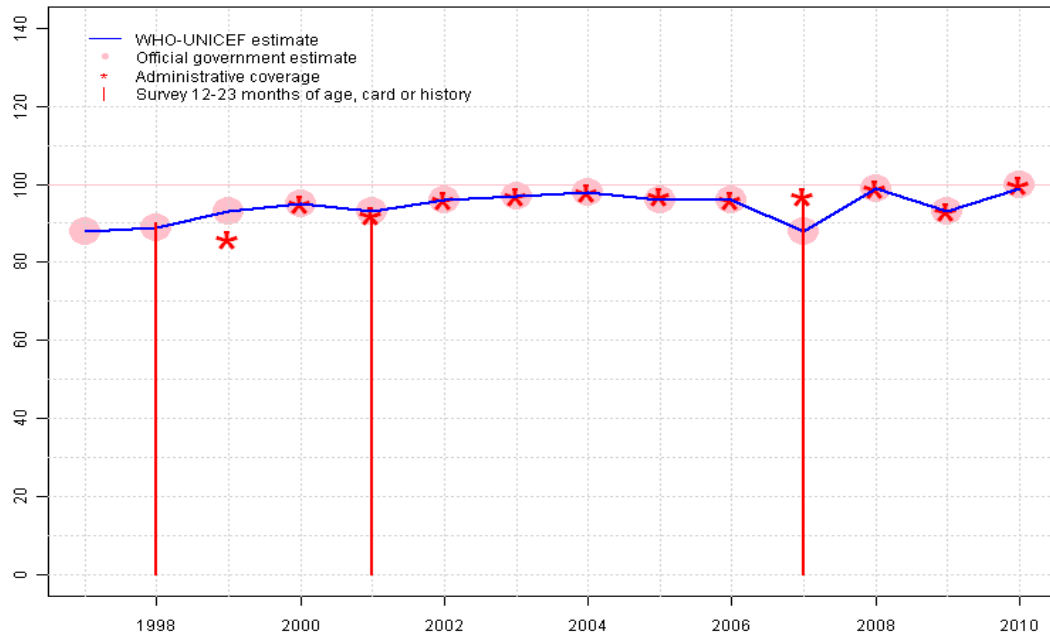


Guatemala - BCG

GTM - BCG



Description:

1997: Legacy estimate.

1998: Estimate based on reported data. 90 percent survey results supports reported data of 89 percent.

1999: Estimate based on reported data.

2000: Estimate based on reported data.

2001: Estimate based on reported data. 92 percent survey results supports reported data of 93 percent. Current estimate of 93 percent changed from previous revision value of 92 percent.

2002: Estimate based on reported data.

2003: Estimate based on reported data.

2004: Estimate based on reported data.

2005: Estimate based on reported data. Current estimate of 96 percent changed from previous revision value of 97 percent.

2006: Estimate based on reported data.

2007: Estimate based on reported data. 97 percent survey results supports reported data of 88 percent. Current estimate of 88 percent changed from previous revision value of 97 percent.

2008: Estimate based on reported data.

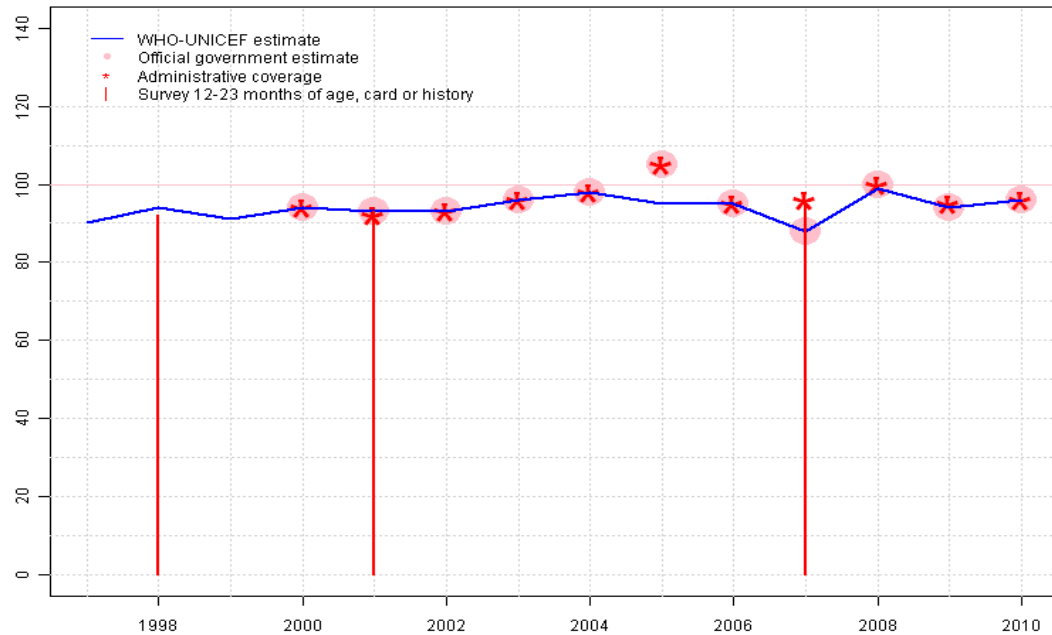
2009: Estimate based on reported data.

2010: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	88	89	93	95	93	96	97	98	96	96	88	99	93	99
Official	88	89	93	95	93	96	97	98	96	96	88	99	93	100
Administrative	NA	NA	86	95	92	96	97	98	97	96	97	99	93	100
Survey	NA	90	NA	NA	92	NA	NA	NA	NA	NA	97	NA	NA	NA

Guatemala - DTP1

GTM - DTP1



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	90	94	91	94	93	93	96	98	95	95	88	99	94	96
Official	NA	NA	NA	94	93	93	96	98	105	95	88	100	94	96
Administrative	NA	NA	NA	94	92	93	96	98	105	95	96	100	95	96
Survey	NA	92	NA	NA	93	NA	NA	NA	NA	NA	96	NA	NA	NA

Description:

1997: Legacy estimate.

1998: No accepted reported data. Reported data of 94 percent estimated by extrapolating from 2000 supports trend in reported data. 92 percent survey results

1999: No accepted DTP1 data. Estimate based on DTP3 coverage of 77. Current estimate of 91 percent changed from previous revision value of 94 percent.

2000: Estimate based on reported data.

2001: Estimate based on reported data. 93 percent survey results supports reported data of 93 percent. Current estimate of 93 percent changed from previous revision value of 92 percent.

2002: Estimate based on reported data.

2003: Estimate based on reported data.

2004: Estimate based on reported data.

2005: No accepted DTP1 data. Estimate based on DTP3 coverage of 87. Reported data of 105 percent greater than 100 percent. Current estimate of 95 percent changed from previous revision value of 97 percent.

2006: Estimate based on reported data.

2007: Estimate based on reported data. 96 percent survey results supports reported data of 88 percent. Current estimate of 88 percent changed from previous revision value of 96 percent.

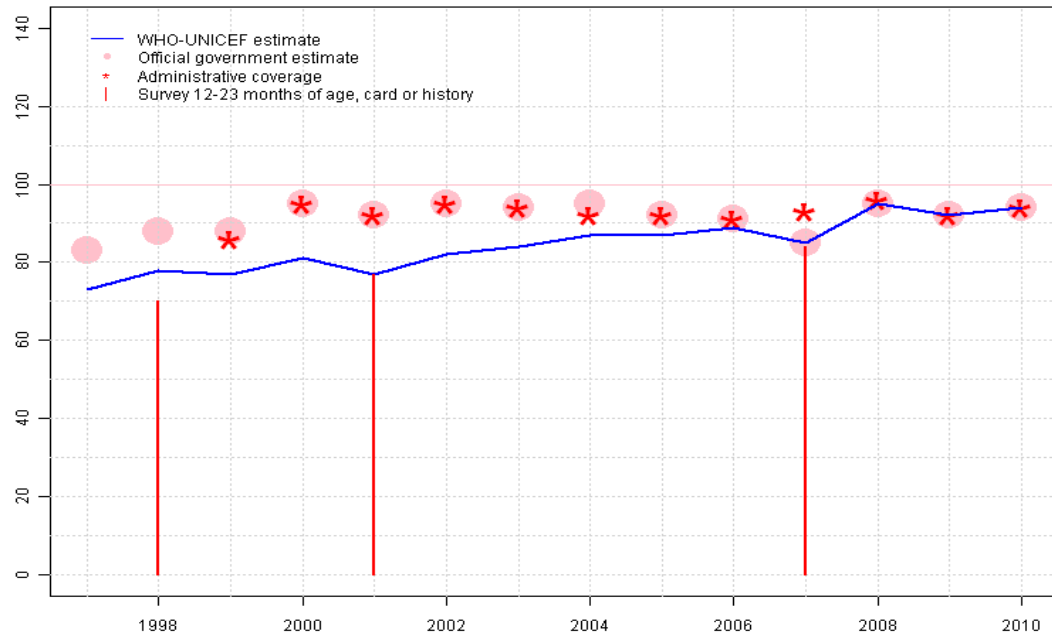
2008: Estimate based on reported data.

2009: Estimate based on reported data. Current estimate of 94 percent changed from previous revision value of 95 percent.

2010: Estimate based on reported data.

Guatemala - DTP3

GTM - DTP3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	73	78	77	81	77	82	84	87	87	89	85	95	92	94
Official	83	88	88	95	92	95	94	95	92	91	85	95	92	94
Administrative	NA	NA	86	95	92	95	94	92	92	91	93	96	92	94
Survey	NA	70	NA	NA	77	NA	NA	NA	NA	NA	84	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on survey results adjusted for recall bias. Survey results of 70 percent modified for recall bias to 78 percent based on 1st dose card or history coverage of 92 percent, 1st dose card only coverage of 66 percent and 3d dose card only coverage of 56 percent.

1999: Reported data calibrated to 1998 and 2001 levels.

2000: Reported data calibrated to 1998 and 2001 levels. Current estimate of 81 percent changed from previous revision value of 83 percent.

2001: Estimate based on survey results. 77 percent survey results does not support reported data of 92 percent. Current estimate of 77 percent changed from previous revision value of 79 percent.

2002: Reported data calibrated to 2001 and 2007 levels. Current estimate of 82 percent changed from previous revision value of 84 percent.

2003: Reported data calibrated to 2001 and 2007 levels. Current estimate of 84 percent changed from previous revision value of 86 percent.

2004: Reported data calibrated to 2001 and 2007 levels. Current estimate of 87 percent changed from previous revision value of 85 percent.

2005: Reported data calibrated to 2001 and 2007 levels.

2006: Reported data calibrated to 2001 and 2007 levels.

2007: Estimate based on reported data. 84 percent survey results supports reported data of 85 percent. Current estimate of 85 percent changed from previous revision value of 93 percent.

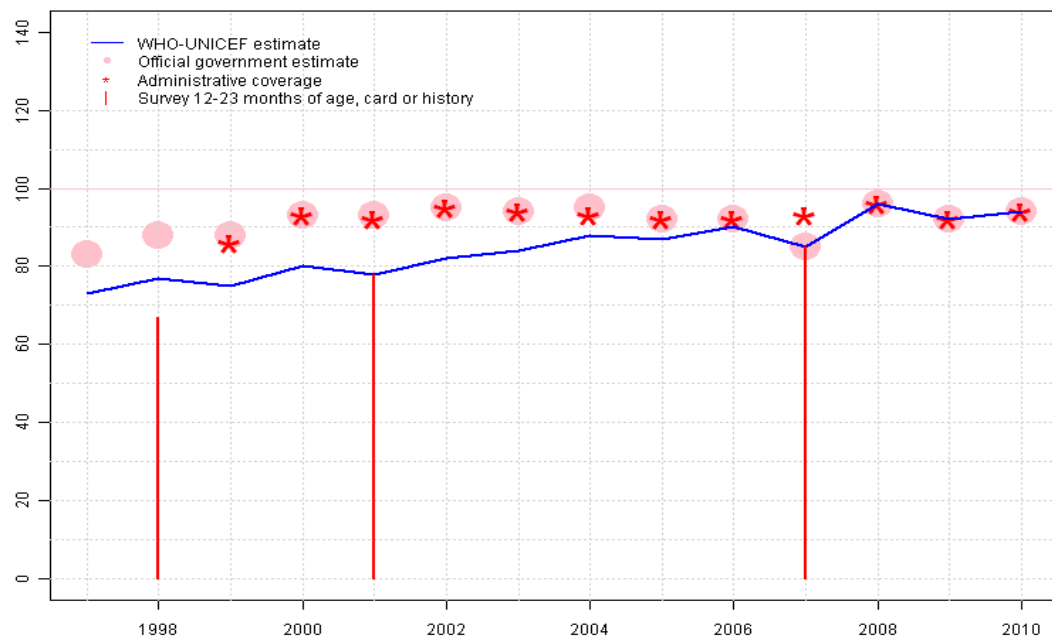
2008: Estimate based on reported data. Current estimate of 95 percent changed from previous revision value of 96 percent.

2009: Estimate based on reported data.

2010: Estimate based on reported data.

Guatemala - Pol3

GTM - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	73	77	75	80	78	82	84	88	87	90	85	96	92	94
Official	83	88	88	93	93	95	94	95	92	92	85	96	92	94
Administrative	NA	NA	86	93	92	95	94	93	92	92	93	96	92	94
Survey	NA	67	NA	NA	78	NA	NA	NA	NA	NA	85	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on survey results. 77 percent survey results does not support reported data of 88 percent. Survey results of 67 percent modified for recall bias to 77 percent based on 1st dose card or history coverage of 92 percent, 1st dose card only coverage of 67 percent and 3d dose card only coverage of 56 percent.

1999: Reported data calibrated to 1998 and 2001 levels. Current estimate of 75 percent changed from previous revision value of 76 percent.

2000: Reported data calibrated to 1998 and 2001 levels.

2001: Estimate based on survey results. 78 percent survey results does not support reported data of 93 percent.

2002: Reported data calibrated to 2001 and 2007 levels. Current estimate of 82 percent changed from previous revision value of 84 percent.

2003: Reported data calibrated to 2001 and 2007 levels. Current estimate of 84 percent changed from previous revision value of 85 percent.

2004: Reported data calibrated to 2001 and 2007 levels. Current estimate of 88 percent changed from previous revision value of 86 percent.

2005: Reported data calibrated to 2001 and 2007 levels.

2006: Reported data calibrated to 2001 and 2007 levels.

2007: Estimate based on reported data. 85 percent survey results supports reported data of 85 percent. Current estimate of 85 percent changed from previous revision value of 93 percent.

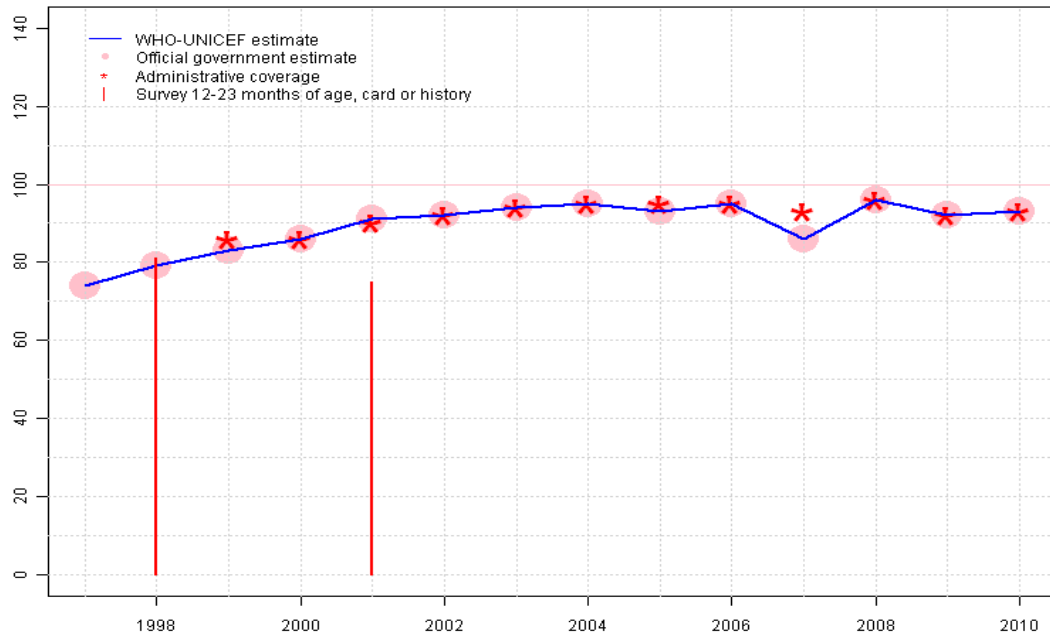
2008: Estimate based on reported data.

2009: Estimate based on reported data.

2010: Estimate based on reported data.

Guatemala - MCV

GTM - MCV



Description:

1997: Legacy estimate.

1998: Estimate based on reported data. 81 percent survey results supports reported data of 79 percent.

1999: Estimate based on reported data.

2000: Estimate based on reported data.

2001: Estimate based on reported data. Survey not accepted. In 2001 the recommended age of administration changed from 9 months of age with measles vaccine to 12 months of age with MMR. The 2001 coverage survey does not include immunizations given during part of 2001. Current estimate of 91 percent changed from previous revision value of 90 percent.

2002: Estimate based on reported data.

2003: Estimate based on reported data.

2004: Estimate based on reported data.

2005: Estimate based on reported data. Current estimate of 93 percent changed from previous revision value of 95 percent.

2006: Estimate based on reported data.

2007: Estimate based on reported data. Survey result of 90 percent for age group 24-35 m supports reported data. Current estimate of 86 percent changed from previous revision value of 93 percent.

2008: Estimate based on reported data.

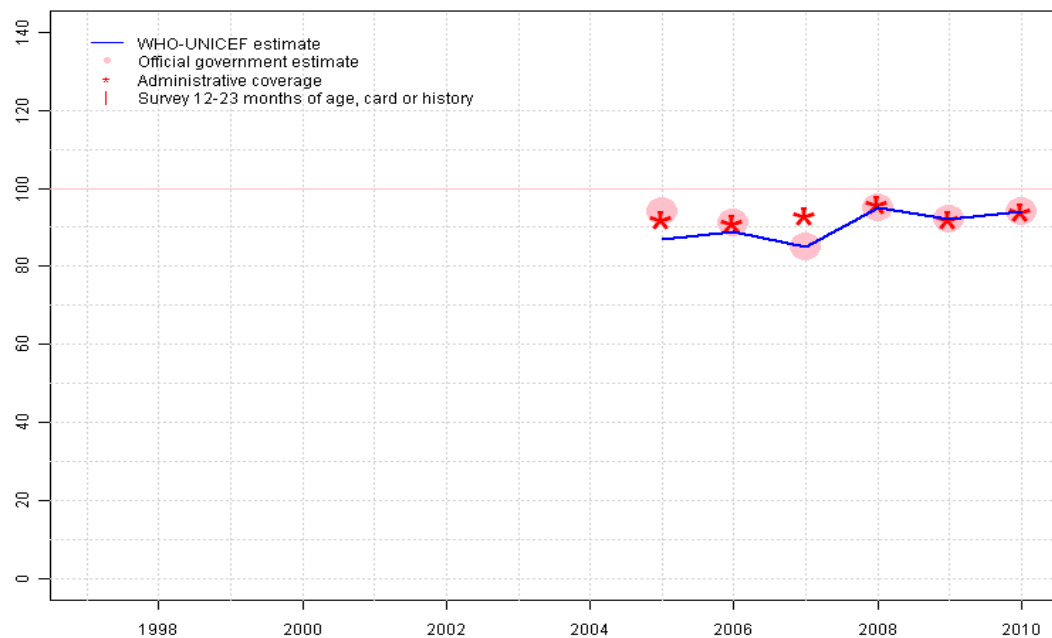
2009: Estimate based on reported data.

2010: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	74	79	83	86	91	92	94	95	93	95	86	96	92	93
Official	74	79	83	86	91	92	94	95	93	95	86	96	92	93
Administrative	NA	NA	86	86	90	92	94	95	95	95	93	96	92	93
Survey	NA	81	NA	NA	75	NA	NA	NA	NA	NA	NA	NA	NA	NA

Guatemala - HepB3

GTM - HepB3



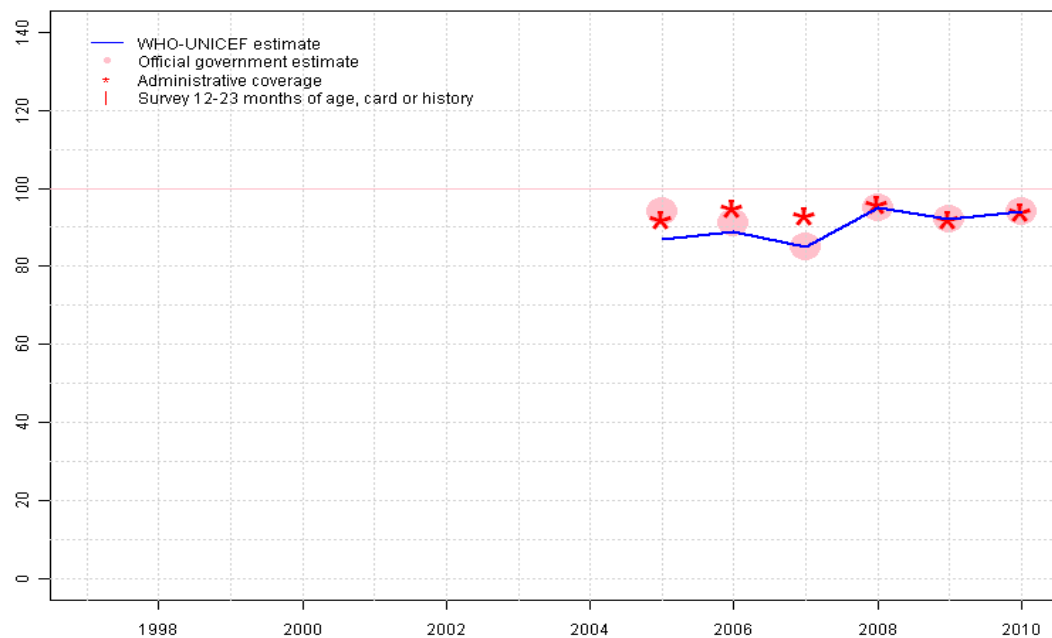
Description:

- 2005: Estimate adjusted to level of DTP3 estimate. HepB introduced in 2005. Vaccine presentation is DTP-HepB-Hib.
- 2006: Estimate adjusted to level of DTP3 estimate.
- 2007: Estimate based on reported data. Current estimate of 85 percent changed from previous revision value of 93 percent.
- 2008: Estimate based on reported data. Current estimate of 95 percent changed from previous revision value of 96 percent.
- 2009: Estimate based on reported data.
- 2010: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	87	89	85	95	92	94
Official	NA	NA	NA	NA	NA	NA	NA	NA	94	91	85	95	92	94
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	92	91	93	96	92	94
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Guatemala - Hib3

GTM - Hib3



Description:

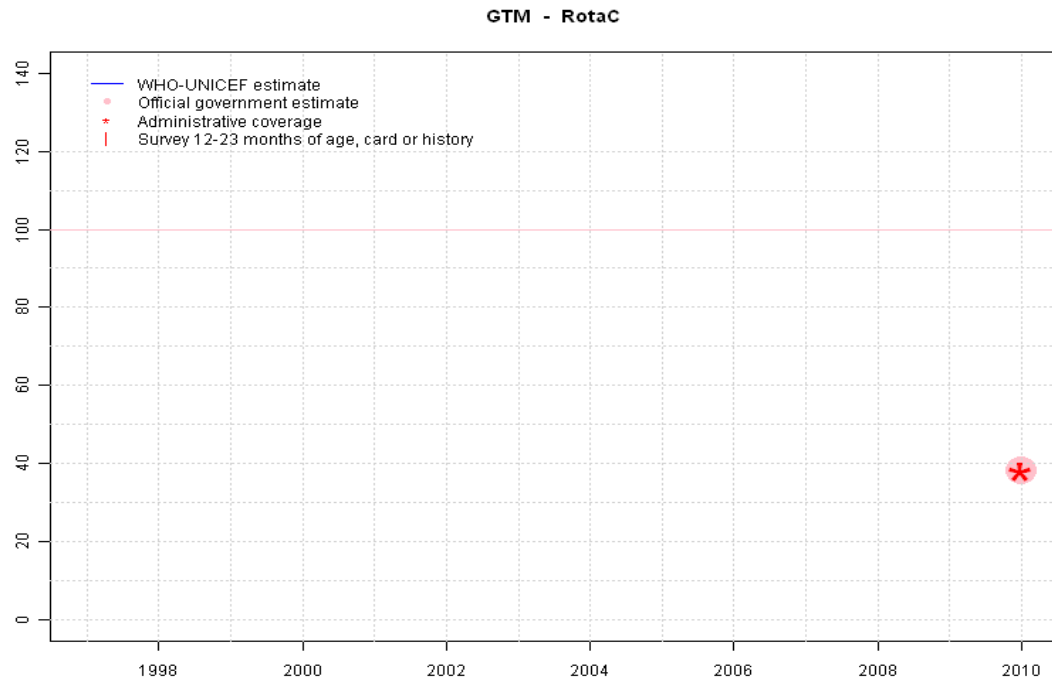
- 2005: Estimate adjusted to level of DTP3 estimate. Hib introduced in 2005 Vaccine presentation is DTP-HepB-Hib.
- 2006: Estimate adjusted to level of DTP3 estimate.
- 2007: Estimate based on reported data. Current estimate of 85 percent changed from previous revision value of 93 percent.
- 2008: Estimate based on reported data. Current estimate of 95 percent changed from previous revision value of 96 percent.
- 2009: Estimate based on reported data.
- 2010: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	87	89	85	95	92	94
Official	NA	NA	NA	NA	NA	NA	NA	NA	94	91	85	95	92	94
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	92	95	93	96	92	94
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Guatemala - RotaC

Description:

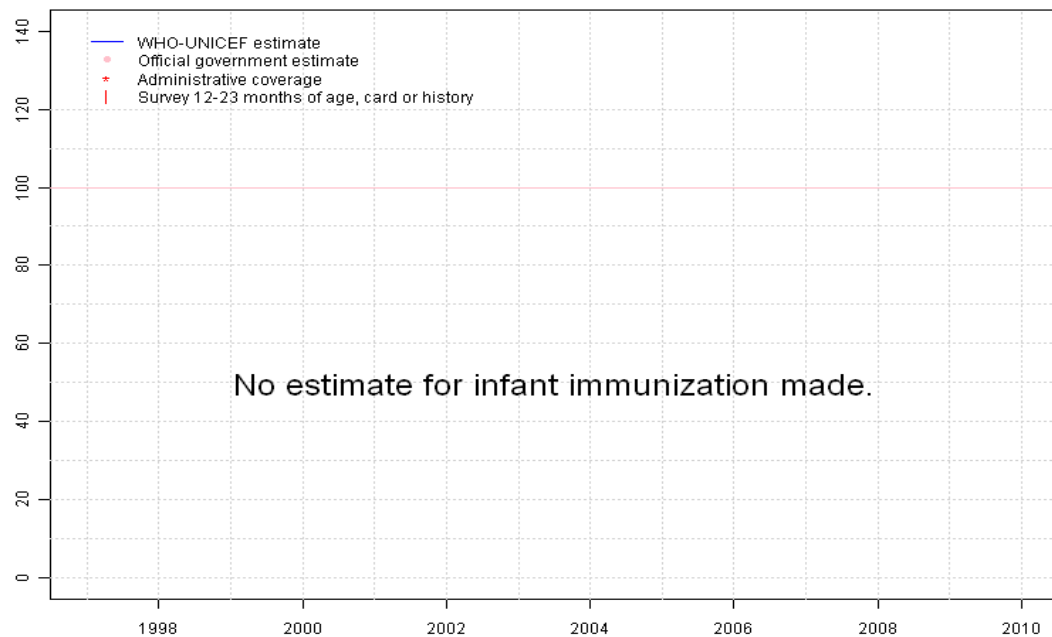
2010: Estimate based on reported data. Rota introduced in 2010.



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Guatemala - PcV3

GTM - PcV3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	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	NA
Administrative	NA	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	NA

Guatemala - survey details

2007 Guatemala, Encuesta Nacional de Salud Materno Infantil 2008-2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	97	12-23 m	1861	87
DTP1	Card or History	96	12-23 m	1861	87
DTP3	Card or History	84	12-23 m	1861	87
MCV	Card or History	90	24-35 m	1861	87
Pol1	Card or History	96	12-23 m	1861	87
Pol3	Card or History	85	12-23 m	1861	87

2001 Guatemala, Encuesta Nacional de Salud Materno Infantil 2002

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	92	12-23 m	1487	69
DTP1	Card or History	93	12-23 m	1487	69
DTP3	Card or History	77	12-23 m	1487	69
MCV	Card or History	75	12-23 m	1487	69
Pol1	Card or History	94	12-23 m	1487	69
Pol3	Card or History	78	12-23 m	1487	69

1998 Guatemala, Encuesta Nacional de Salud Materno Infantil 1998-1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	90	12-23 m	848	68
BCG	C or H <12 months	82	12-23 m	848	68
BCG	History	26	12-23 m	848	68
BCG	Card	65	12-23 m	848	68
BCG	C or H <12 months	77	24-35 m	868	60
BCG	C or H <12 months	71	36-47 m	849	55

BCG	C or H <12 months	68	48-59 m	843	46
DTP1	Card or History	92	12-23 m	848	68
DTP1	C or H <12 months	88	12-23 m	848	68
DTP1	History	26	12-23 m	848	68
DTP1	Card	66	12-23 m	848	68
DTP1	C or H <12 months	80	24-35 m	868	60
DTP1	C or H <12 months	72	36-47 m	849	55
DTP1	C or H <12 months	68	48-59 m	843	46
DTP3	History	15	12-23 m	848	68
DTP3	Card	56	12-23 m	848	68
DTP3	Card or History	70	12-23 m	848	68
DTP3	C or H <12 months	54	12-23 m	848	68
DTP3	C or H <12 months	51	24-35 m	868	60
DTP3	C or H <12 months	44	36-47 m	849	55
DTP3	C or H <12 months	49	48-59 m	843	46
MCV	History	22	12-23 m	848	68
MCV	Card or History	81	12-23 m	848	68
MCV	Card	59	12-23 m	848	68
MCV	C or H <12 months	53	12-23 m	848	68
MCV	C or H <12 months	48	24-35 m	868	60
MCV	C or H <12 months	45	36-47 m	849	55
MCV	C or H <12 months	36	48-59 m	843	46
Pol1	Card	67	12-23 m	848	68
Pol1	Card or History	92	12-23 m	848	68
Pol1	C or H <12 months	59	12-23 m	848	68
Pol1	History	25	12-23 m	848	68
Pol1	C or H <12 months	81	24-35 m	868	60
Pol1	C or H <12 months	73	36-47 m	849	55
Pol1	C or H <12 months	68	48-59 m	843	46
Pol3	C or H <12 months	52	12-23 m	848	68
Pol3	Card	56	12-23 m	848	68
Pol3	Card or History	67	12-23 m	848	68
Pol3	History	10	12-23 m	848	68
Pol3	C or H <12 months	49	24-35 m	868	60
Pol3	C or H <12 months	39	36-47 m	849	55
Pol3	C or H <12 months	42	48-59 m	843	46

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

Guatemala - survey details

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

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

Guatemala

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	58
1998	59
1999	66
2000	67
2001	68
2002	68
2003	69
2004	70
2005	70
2006	70
2007	71
2008	71
2009	71
2010	85

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.