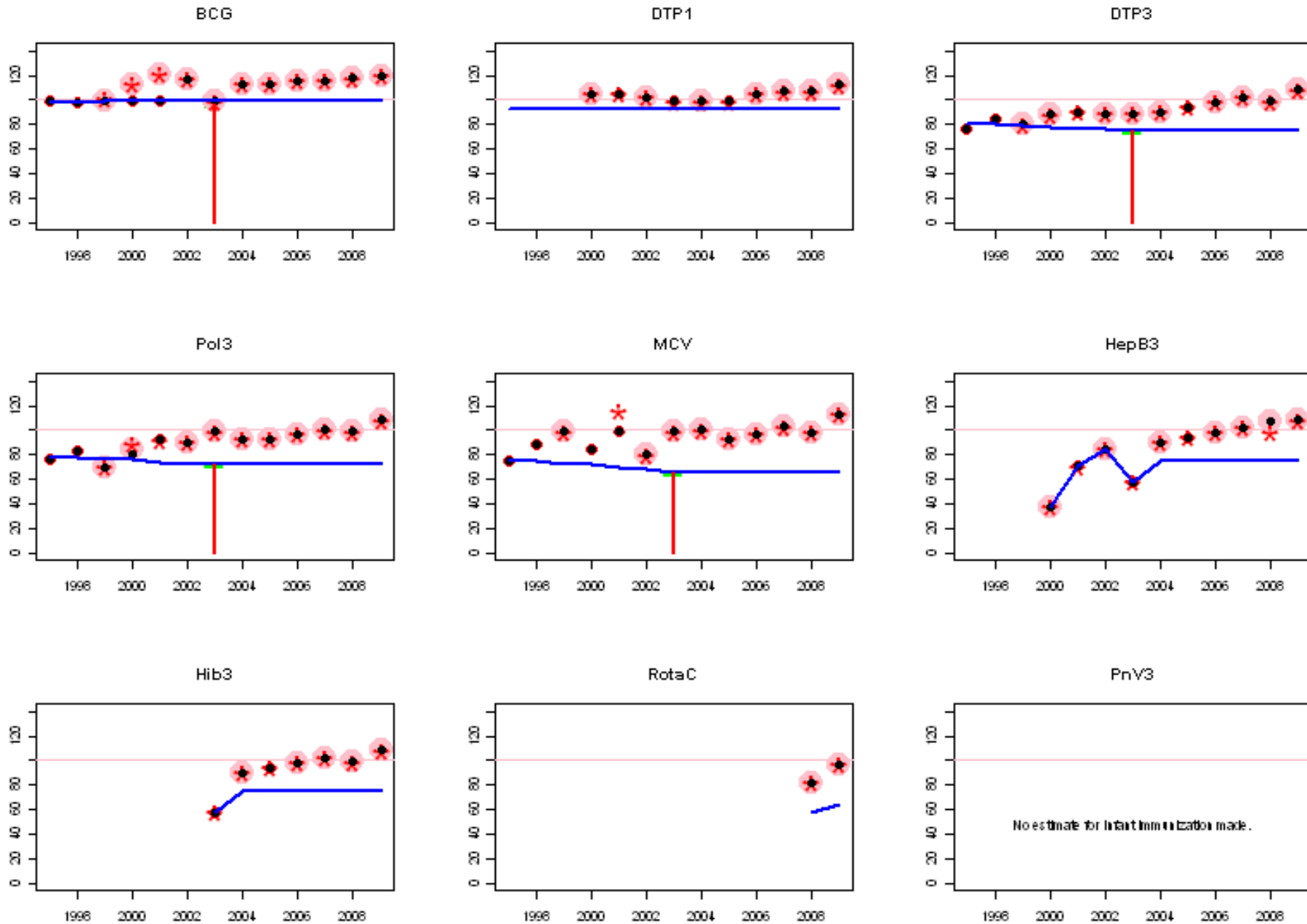
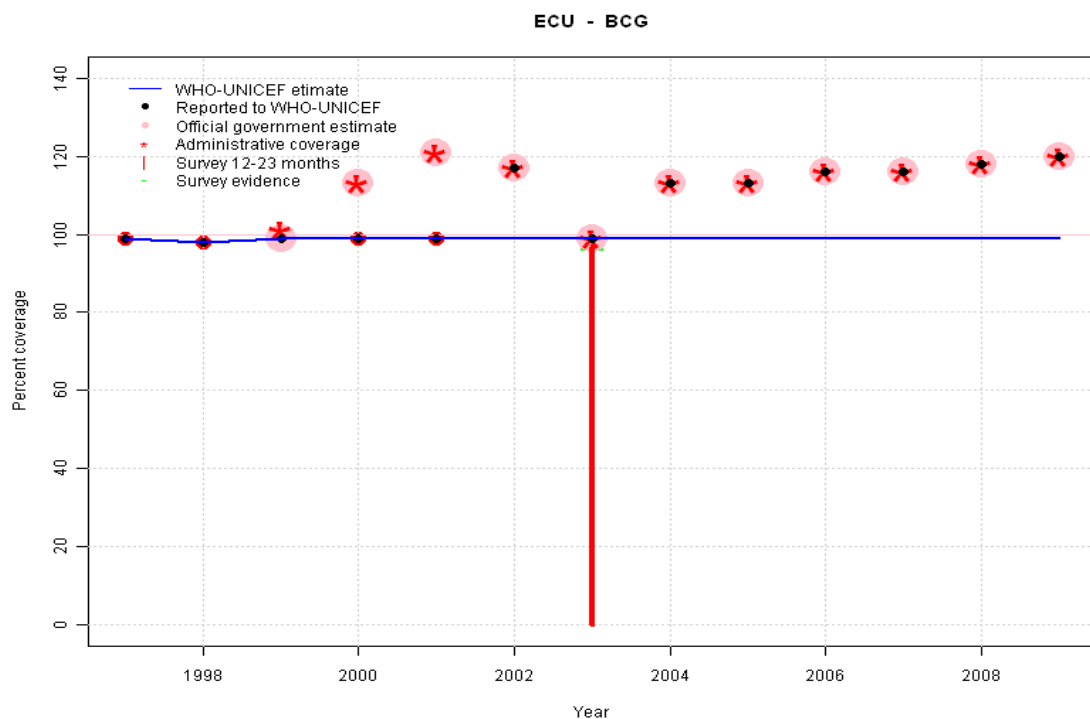


Ecuador: WHO and UNICEF estimates of immunization coverage, 1997 - 2009



Ecuador - BCG



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	99	98	99	99	99	99	99	99	99	99	99	99	99
Reported	99	98	99	99	99	117	99	113	113	116	116	118	120
Official	NA	NA	99	113	121	117	99	113	113	116	116	118	120
Administrative	NA	NA	101	113	121	117	99	113	113	116	116	118	120
Survey	NA	NA	NA	NA	NA	NA	97	NA	NA	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate based on reported data.

1999: Estimate based on reported data.

2000: Estimate based on reported data.

2001: Estimate based on reported data.

2002: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2001 reported value of 99 percent. 2002 reported data (117 percent) ignored; greater than 100 percent. 2002 reported data (117 percent) inconsistent with data from other years.

2003: Estimate based on interpolated value between reported data. Survey (97 percent) confirms trend in reported data. 2003 reported data (99 percent) inconsistent with data from other years.

2004: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2001 reported value of 99 percent. 2004 reported data (113 percent) ignored; greater than 100 percent.

2005: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2001 reported value of 99 percent. 2005 reported data (113 percent) ignored; greater than 100 percent.

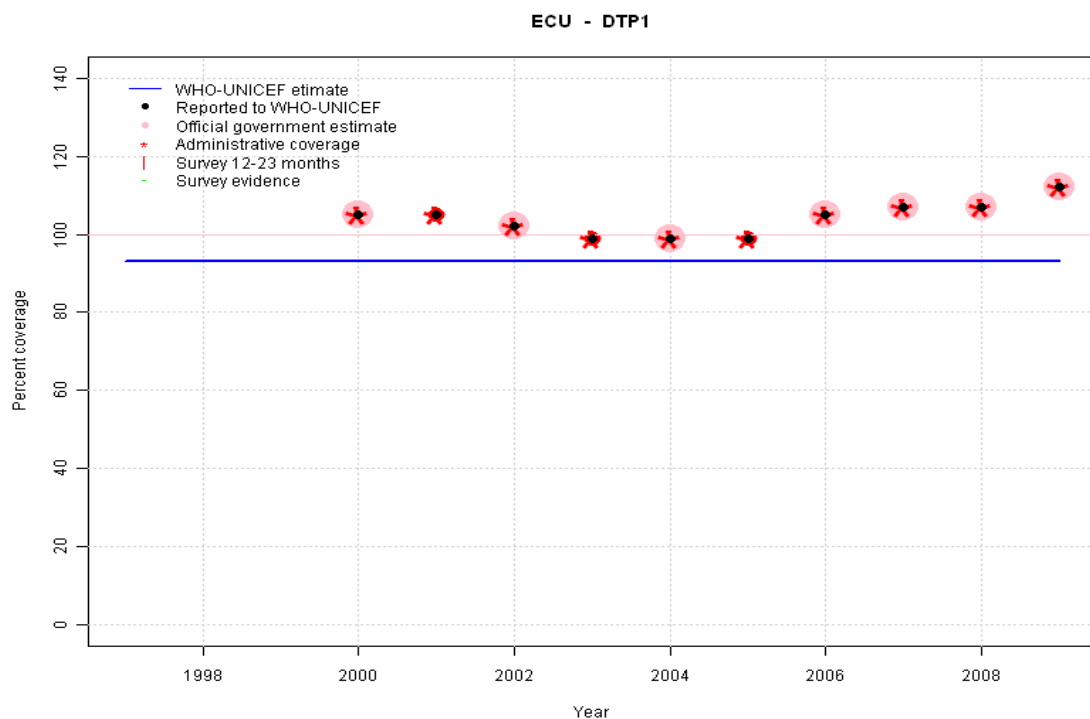
2006: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2001 reported value of 99 percent. 2006 reported data (116 percent) ignored; greater than 100 percent.

2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2001 reported value of 99 percent. 2007 reported data (116 percent) ignored; greater than 100 percent.

2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2001 reported value of 99 percent. 2008 reported data (118 percent) ignored; greater than 100 percent.

2009: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2001 reported value of 99 percent. 2009 reported data (120 percent) ignored; greater than 100 percent.

Ecuador - DTP1



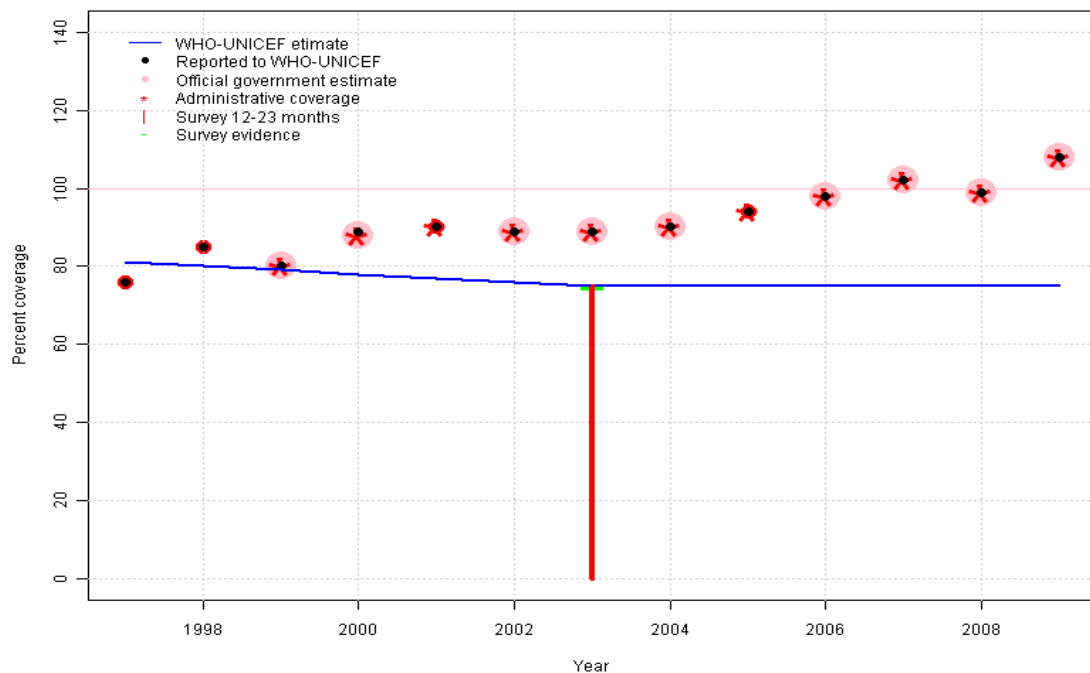
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	93	93	93	93	93	93	93	93	93	93	93	93	93
Reported	NA	NA	NA	105	105	102	99	99	99	105	107	107	112
Official	NA	NA	NA	105	NA	102	NA	99	NA	105	107	107	112
Administrative	NA	NA	NA	105	105	102	99	99	99	105	107	107	112
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent).
- 1999: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent).
- 2000: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent). 2000 reported data (105 percent) ignored; greater than 100 percent.
- 2001: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent). 2001 reported data (105 percent) ignored; greater than 100 percent.
- 2002: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent). 2002 reported data (102 percent) ignored; greater than 100 percent.
- 2003: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent).
- 2004: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent).
- 2005: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent).
- 2006: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent). 2006 reported data (105 percent) ignored; greater than 100 percent.
- 2007: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent). 2007 reported data (107 percent) ignored; greater than 100 percent.
- 2008: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent). 2008 reported data (107 percent) ignored; greater than 100 percent.
- 2009: Estimate calibrated to 1997 level (93 percent) and reported coverage (99 percent). 2009 reported data (112 percent) ignored; greater than 100 percent.

Ecuador - DTP3

ECU - DTP3



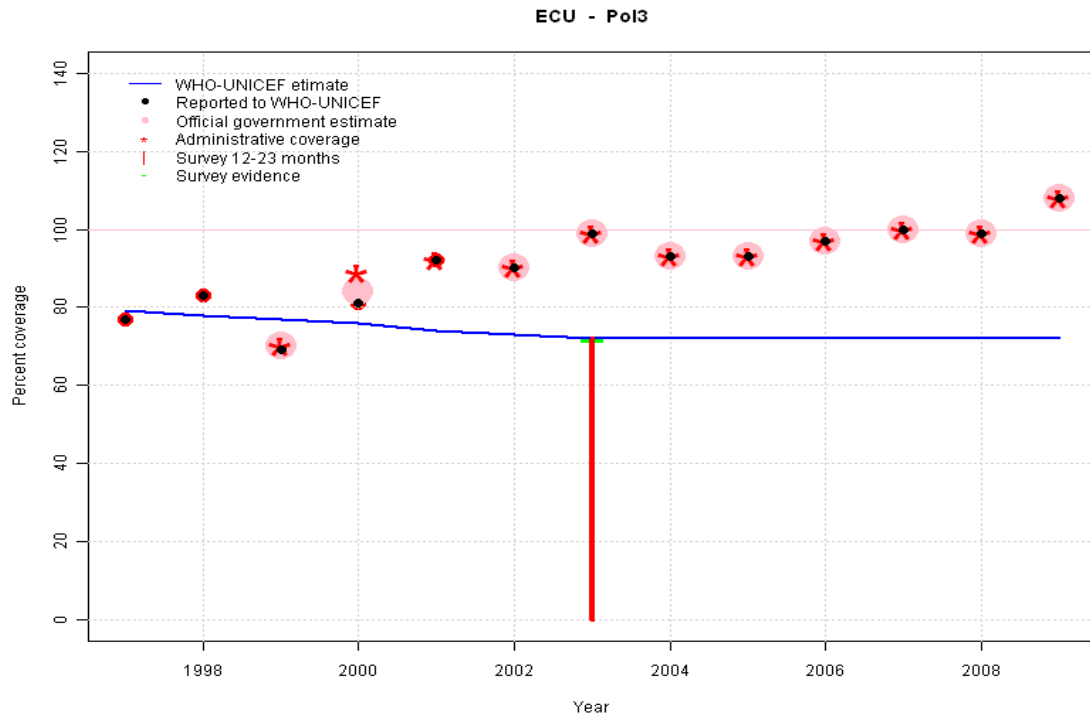
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	81	80	79	78	77	76	75	75	75	75	75	75	75
Reported	76	85	80	89	90	89	89	90	94	98	102	99	108
Official	NA	NA	80	88	NA	89	89	90	NA	98	102	99	108
Administrative	NA	NA	80	88	90	89	89	90	94	98	102	99	108
Survey	NA	NA	NA	NA	NA	NA	75	NA	NA	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 2003 estimates.
- 1999: Estimate interpolated between 1997 and 2003 estimates.
- 2000: Estimate interpolated between 1997 and 2003 estimates.
- 2001: Estimate interpolated between 1997 and 2003 estimates.
- 2002: Estimate interpolated between 1997 and 2003 estimates.
- 2003: Estimate based on survey results. Reported data (89 percent) not consistent with survey results (75 percent).
- 2004: Estimate extrapolated from 2003 level (75 percent).
- 2005: Estimate extrapolated from 2003 level (75 percent).
- 2006: Estimate extrapolated from 2003 level (75 percent).
- 2007: Estimate extrapolated from 2003 level (75 percent). 2007 reported data (102 percent) ignored; greater than 100 percent.
- 2008: Estimate extrapolated from 2003 level (75 percent).
- 2009: Estimate extrapolated from 2003 level (75 percent). 2009 reported data (108 percent) ignored; greater than 100 percent.

Ecuador - Pol3

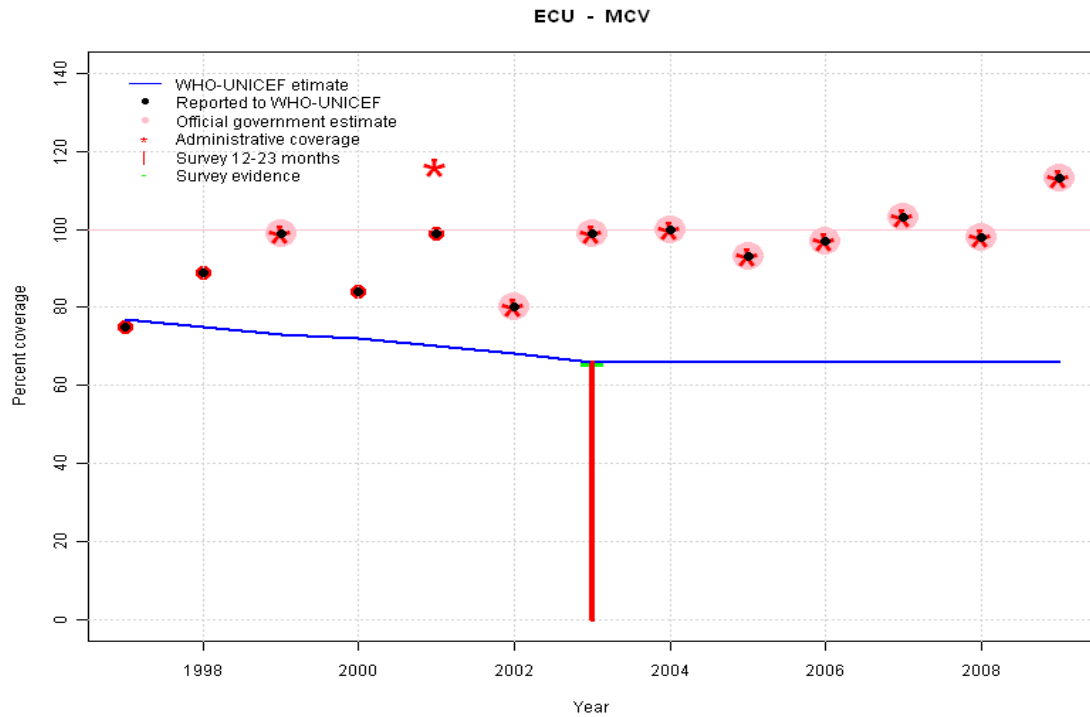
Description:



- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 2003 estimates.
- 1999: Estimate interpolated between 1997 and 2003 estimates. 1999 reported data (69 percent) inconsistent with data from other years.
- 2000: Estimate interpolated between 1997 and 2003 estimates.
- 2001: Estimate interpolated between 1997 and 2003 estimates.
- 2002: Estimate interpolated between 1997 and 2003 estimates.
- 2003: Estimate based on survey results. Reported data (99 percent) not consistent with survey results (72 percent).
- 2004: Estimate extrapolated from 2003 level (72 percent).
- 2005: Estimate extrapolated from 2003 level (72 percent).
- 2006: Estimate extrapolated from 2003 level (72 percent).
- 2007: Estimate extrapolated from 2003 level (72 percent).
- 2008: Estimate extrapolated from 2003 level (72 percent).
- 2009: Estimate extrapolated from 2003 level (72 percent). 2009 reported data (108 percent) ignored; greater than 100 percent.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	79	78	77	76	74	73	72	72	72	72	72	72	72
Reported	77	83	69	81	92	90	99	93	93	97	100	99	108
Official	NA	NA	70	84	NA	90	99	93	93	97	100	99	108
Administrative	NA	NA	70	89	92	90	99	93	93	97	100	99	108
Survey	NA	NA	NA	NA	NA	NA	72	NA	NA	NA	NA	NA	NA

Ecuador - MCV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	77	75	73	72	70	68	66	66	66	66	66	66	66
Reported	75	89	99	84	99	80	99	100	93	97	103	98	113
Official	NA	NA	99	NA	NA	80	99	100	93	97	103	98	113
Administrative	NA	NA	99	NA	116	80	99	100	93	97	103	98	113
Survey	NA	NA	NA	NA	NA	NA	66	NA	NA	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Estimate interpolated between 1997 and 2003 estimates.

1999: Estimate interpolated between 1997 and 2003 estimates.

2000: Estimate interpolated between 1997 and 2003 estimates. 2000 reported data (84 percent) inconsistent with data from other years.

2001: Estimate interpolated between 1997 and 2003 estimates. 2001 reported data (99 percent) inconsistent with data from other years.

2002: Estimate interpolated between 1997 and 2003 estimates. 2002 reported data (80 percent) inconsistent with data from other years.

2003: Estimate based on survey results. Reported data (99 percent) not consistent with survey results (66 percent). Survey results likely underestimate coverage. Measles vaccination recommended between 12 and 23 months of age. Survey cohort of 12-23 months of age includes children still eligible for vaccination.

2004: Estimate extrapolated from 2003 level (66 percent).

2005: Estimate extrapolated from 2003 level (66 percent).

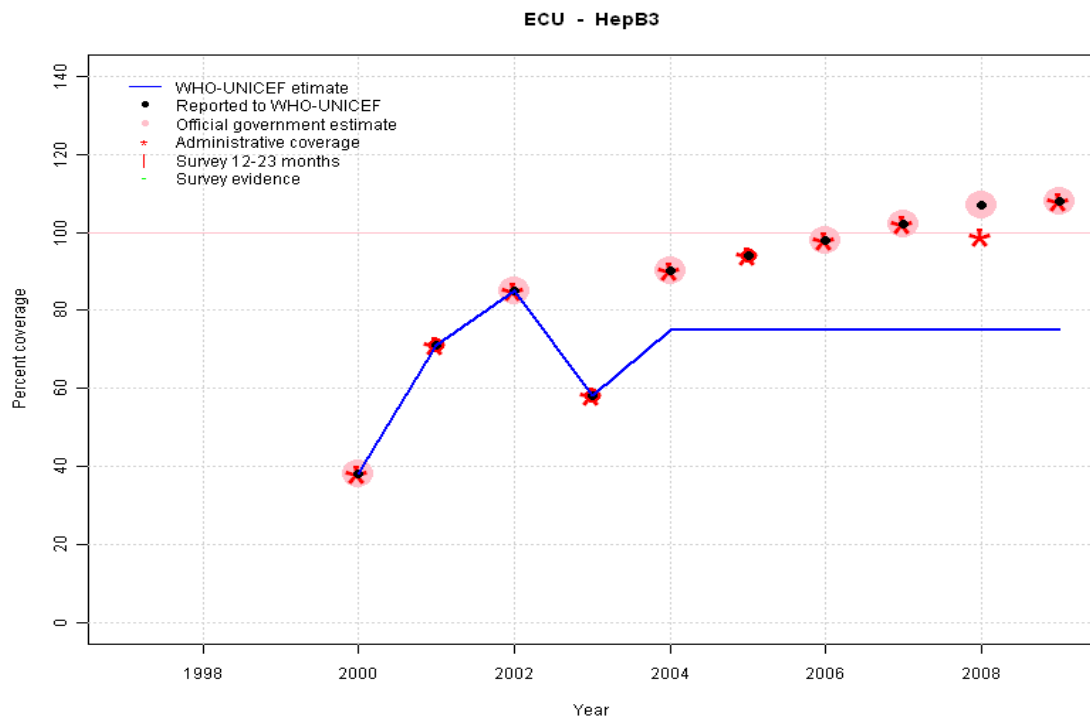
2006: Estimate extrapolated from 2003 level (66 percent).

2007: Estimate extrapolated from 2003 level (66 percent). 2007 reported data (103 percent) ignored; greater than 100 percent.

2008: Estimate extrapolated from 2003 level (66 percent).

2009: Estimate extrapolated from 2003 level (66 percent). 2009 reported data (113 percent) ignored; greater than 100 percent. 2009 reported data (113 percent) inconsistent with data from other years.

Ecuador - HepB3



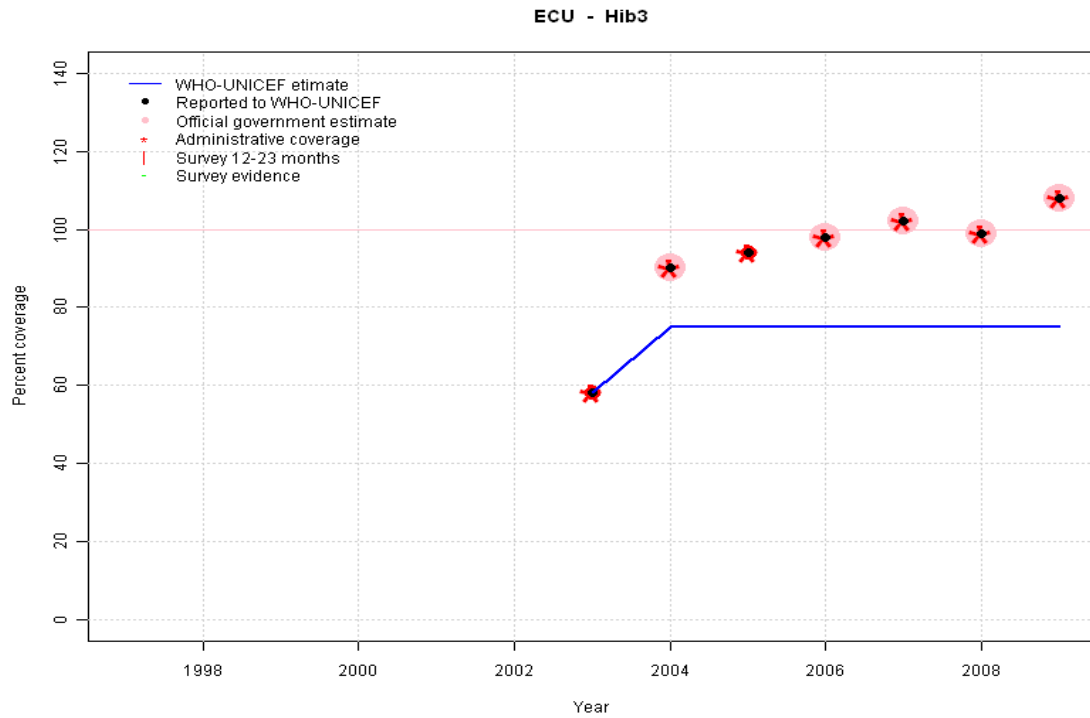
Description:

- 2000: Estimate follows reported data. HepB introduced in 1999. Reporting started in 2000. Vaccine presentation is DTP-HepB-Hib.
- 2001: Estimate follows reported data.
- 2002: Estimate follows reported data. 2002 reported data (85 percent) inconsistent with data from other years.
- 2003: Decline associated with replacement of monovalent hepatitis B vaccine with DTP-HepB-Hib combination vaccine. 2003 reported data (58 percent) inconsistent with data from other years.
- 2004: Estimate based on estimated DTP3 coverage.
- 2005: Estimate based on estimated DTP3 coverage.
- 2006: Estimate based on estimated DTP3 coverage.
- 2007: Estimate based on estimated DTP3 coverage. 2007 reported data (102 percent) ignored; greater than 100 percent.
- 2008: Estimate based on estimated DTP3 coverage. 2008 reported data (107 percent) ignored; greater than 100 percent.
- 2009: Estimate extrapolated from 2008 level (75 percent). 2009 reported data (108 percent) ignored; greater than 100 percent.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	38	71	85	58	75	75	75	75	75	75
Reported	NA	NA	NA	38	71	85	58	90	94	98	102	107	108
Official	NA	NA	NA	38	NA	85	NA	90	NA	98	102	107	108
Administrative	NA	NA	NA	38	71	85	58	90	94	98	102	99	108
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Ecuador - Hib3

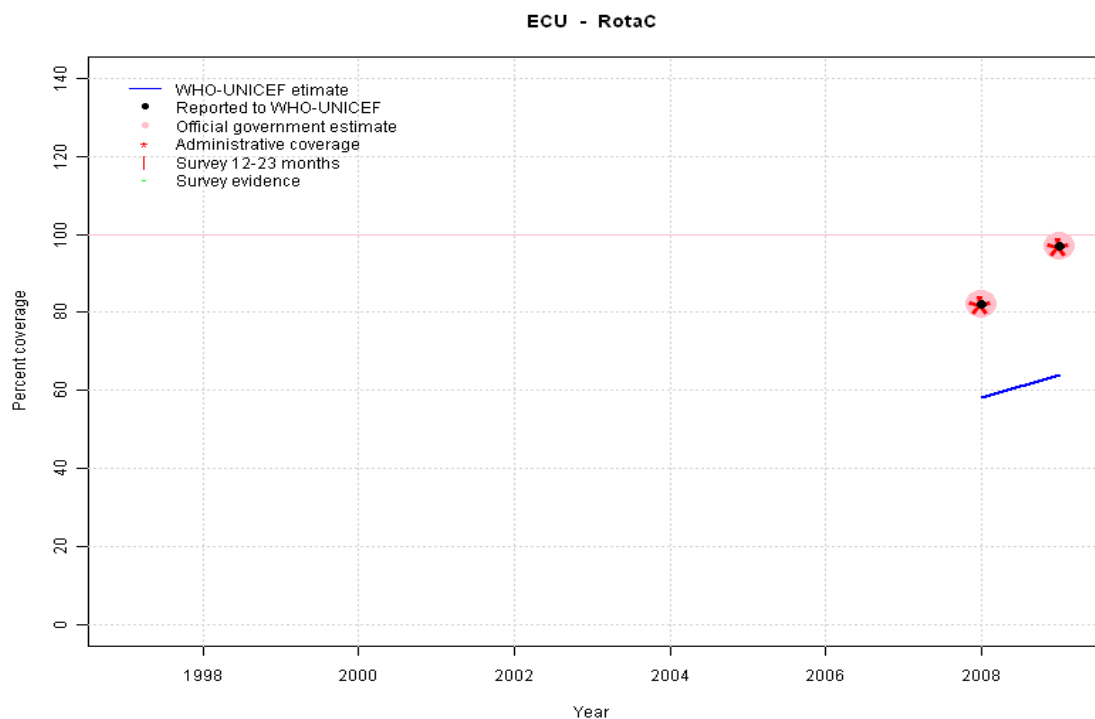
Description:



- 2003: Hib introduced in 2003 Vaccine presentation is DTP-HepB-Hib.
- 2004: Estimate based on estimated DTP3 coverage.
- 2005: Estimate based on estimated DTP3 coverage.
- 2006: Estimate based on estimated DTP3 coverage.
- 2007: Estimate based on estimated DTP3 coverage. 2007 reported data (102 percent) ignored; greater than 100 percent.
- 2008: Estimate based on estimated DTP3 coverage.
- 2009: Estimate extrapolated from 2008 level (75 percent). 2009 reported data (108 percent) ignored; greater than 100 percent.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	58	75	75	75	75	75	75
Reported	NA	NA	NA	NA	NA	NA	58	90	94	98	102	99	108
Official	NA	NA	NA	NA	NA	NA	NA	90	NA	98	102	99	108
Administrative	NA	NA	NA	NA	NA	NA	58	90	94	98	102	99	108
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Ecuador - RotaC



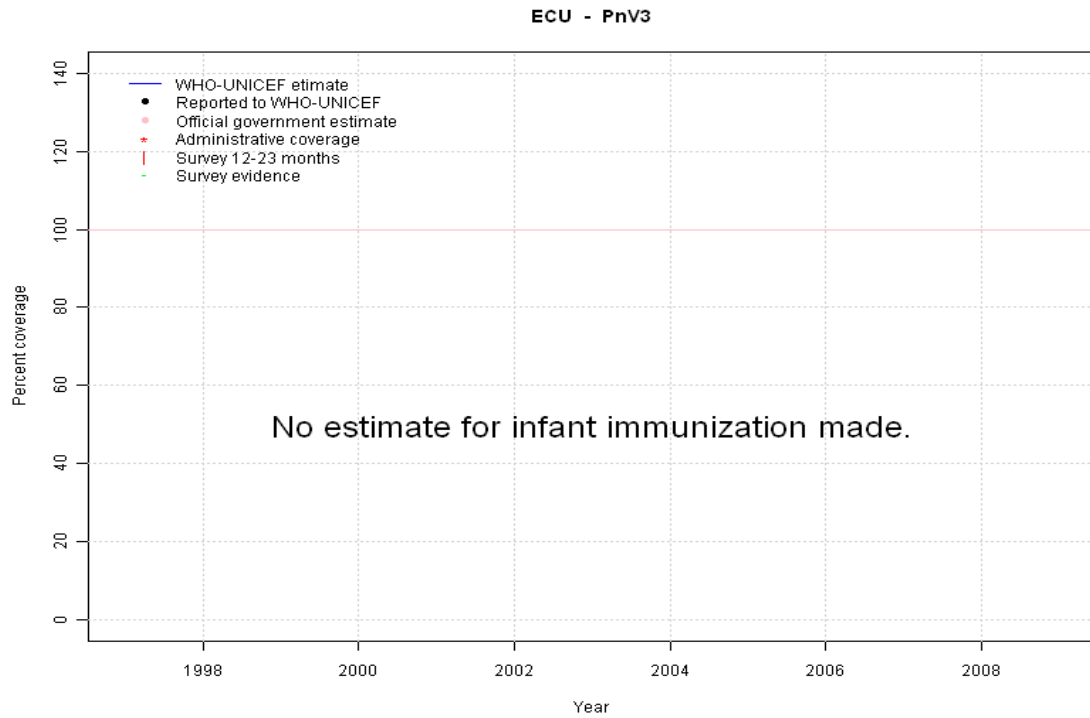
Description:

2008: Rota introduced in 2007, reporting began in 2008. Estimate calibrated by DTP3 adjustment factor.

2009: Rota introduced in 2007, reporting began in 2008. Estimate calibrated by DTP3 adjustment factor. 2009 reported data (97 percent) inconsistent with data from other years.

	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	58	64
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	82	97
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	82	97
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	82	97
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Ecuador - 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

Ecuador - survey details

2003 Encuesta Demográfica y de Salud Materna e Infantil (ENDEMAIN-2004)

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	97	12-23 m	788	72
BCG	C or H <12 months	93	12-23 m	788	72
DTP3	Card or History	75	12-23 m	788	72
DTP3	C or H <12 months	70	12-23 m	788	72
MCV	Card or History	66	12-23 m	788	72
MCV	C or H <12 months	18	12-23 m	788	72
Pol3	Card or History	72	12-23 m	788	72
Pol3	C or H <12 months	68	12-23 m	788	72

1998 República del Ecuador, Encuesta Demográfica y de Salud Materna e Infantil Endemain-99, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	58	12-23 m	679	60
DTP1	Card	58	12-23 m	679	60
DTP3	Card	52	12-23 m	679	60
MCV	Card	46	12-23 m	679	60
Pol1	Card	58	12-23 m	679	60
Pol3	Card	52	12-23 m	679	60

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

Ecuador

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	37
1998	38
1999	40
2000	42
2001	57
2002	58
2003	60
2004	60
2005	65
2006	72
2007	72
2008	73
2009	73

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.