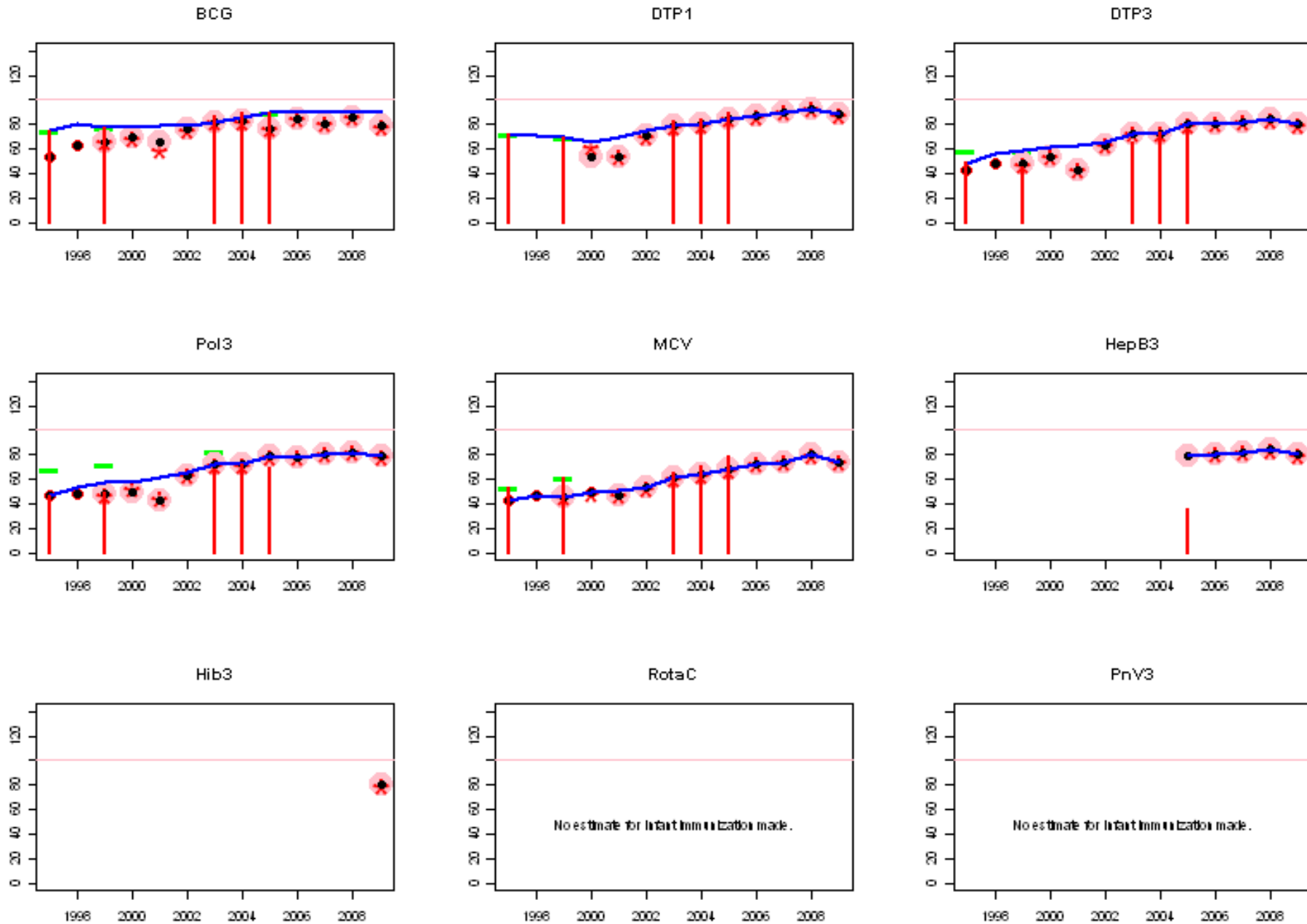
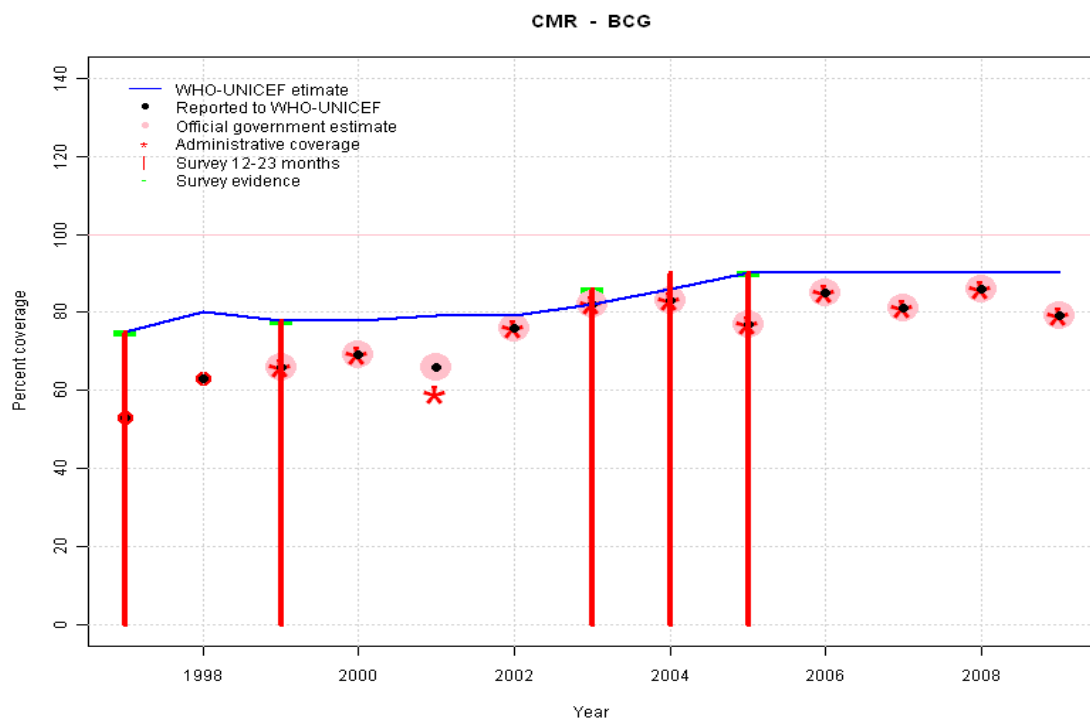


Cameroon: WHO and UNICEF estimates of immunization coverage, 1997 - 2009



Cameroon - BCG



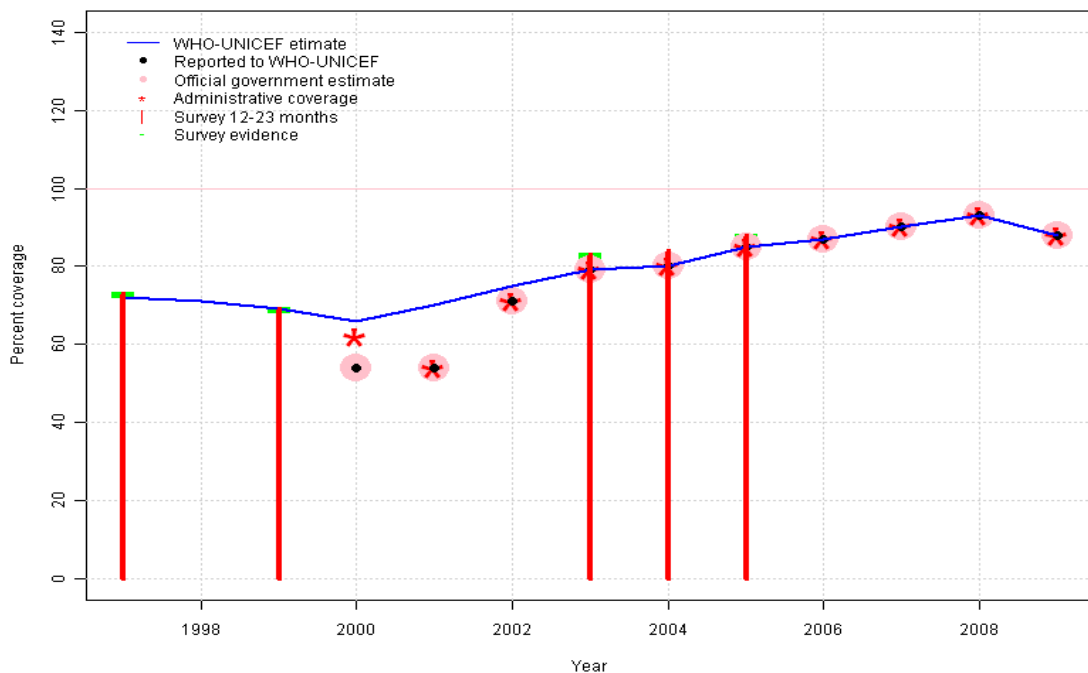
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	75	80	78	78	79	79	82	86	90	90	90	90	90
Reported	53	63	66	69	66	76	82	83	77	85	81	86	79
Official	NA	NA	66	69	66	76	82	83	77	85	81	86	79
Administrative	NA	NA	66	69	59	76	82	83	77	85	81	86	79
Survey	75	NA	78	NA	NA	NA	86	NA	90	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Reported data (63 percent) calibrated to 1997 and 1999 levels.
- 1999: Estimate based on survey results. Reported data (66 percent) not consistent with survey results (78 percent).
- 2000: Reported data (69 percent) calibrated to 1999 and 2003 levels.
- 2001: Reported data (73 percent) calibrated to 1999 and 2003 levels. Missing or ignored reported value estimated by interpolation between reported values of 69 percent in 2000 and 76 percent in 2002. 2001 reported data (66 percent) ignored by working group. Decline in reported data attributed to incomplete reporting.
- 2002: Reported data (76 percent) calibrated to 1999 and 2003 levels.
- 2003: Estimate based on reported data (82 percent) confirmed by survey (86 percent).
- 2004: Estimate interpolated between 2003 and 2005 estimates. Survey results of 90 percent with sample size 0 ignored; sample size less than 300.
- 2005: Estimate based on survey results. Reported data (77 percent) not consistent with survey results (90 percent). BCG estimates based on survey results. Denominator for BCG varies widely
- 2006: Estimate extrapolated from 2005 level (90 percent).
- 2007: Estimate extrapolated from 2005 level (90 percent).
- 2008: Estimate extrapolated from 2005 level (90 percent).
- 2009: Estimate extrapolated from 2005 level (90 percent).

Cameroon - DTP1

CMR - DTP1



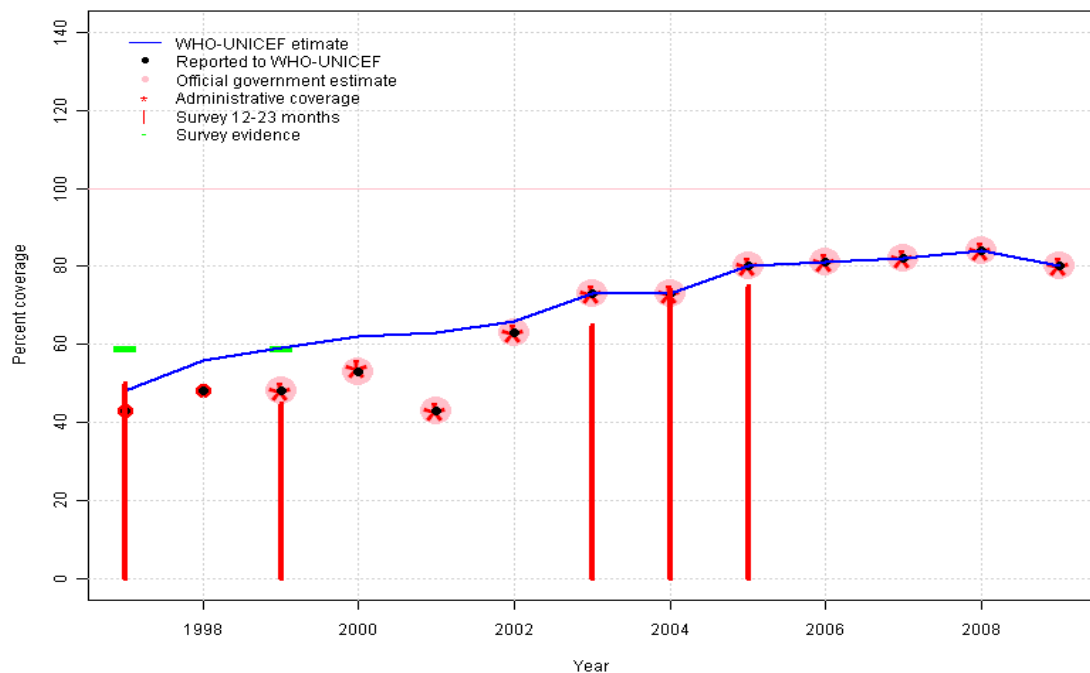
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	72	71	69	66	70	75	79	80	85	87	90	93	88
Reported	NA	NA	NA	54	54	71	79	80	85	87	90	93	88
Official	NA	NA	NA	54	54	71	79	80	85	87	90	93	88
Administrative	NA	NA	NA	62	54	71	79	80	85	87	90	93	88
Survey	73	NA	69	NA	NA	NA	83	NA	88	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 1999 estimates.
- 1999: Estimate based on survey results. Reported data (54 percent) not consistent with survey results (69 percent).
- 2000: Reported data (54 percent) calibrated to 1999 and 2003 levels.
- 2001: Reported data (63 percent) calibrated to 1999 and 2003 levels. Missing or ignored reported value estimated by interpolation between reported values of 54 percent in 2000 and 71 percent in 2002. 2001 reported data (54 percent) ignored by working group. Decline in reported data attributed to incomplete reporting.
- 2002: Reported data (71 percent) calibrated to 1999 and 2003 levels.
- 2003: Estimate based on reported data (79 percent) confirmed by survey (83 percent).
- 2004: Estimate based on reported data. Survey results of 84 percent with sample size 0 ignored; sample size less than 300.
- 2005: Estimate based on reported data (85 percent) confirmed by survey (88 percent).
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data.

Cameroon - DTP3

CMR - DTP3

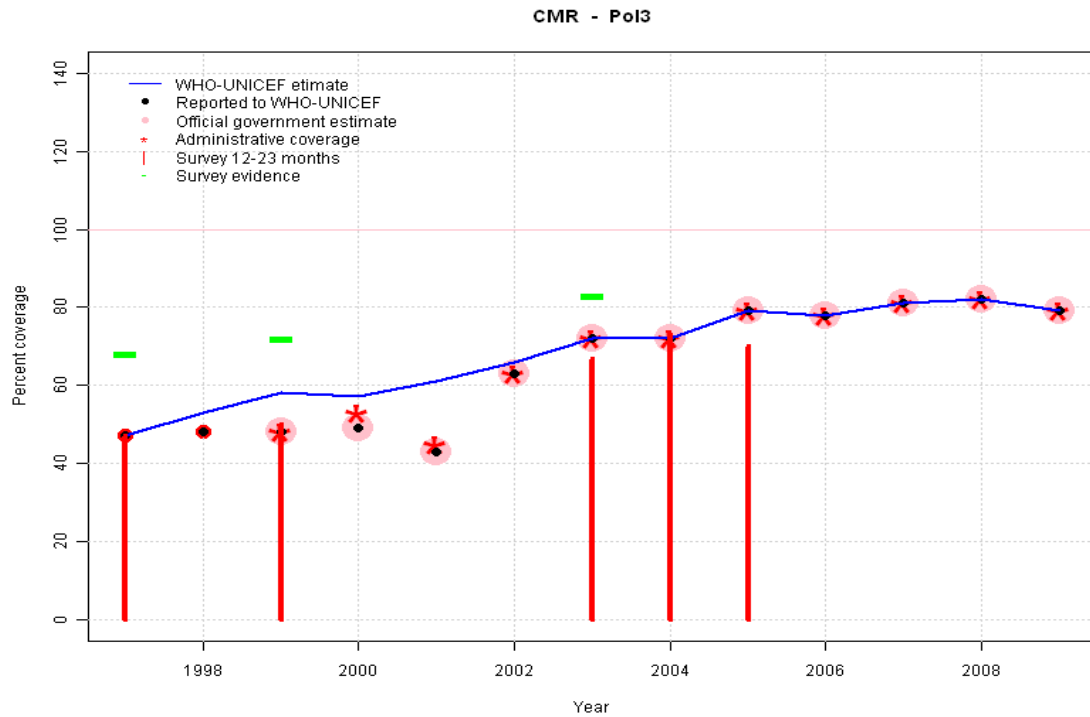


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	48	56	59	62	63	66	73	73	80	81	82	84	80
Reported	43	48	48	53	43	63	73	73	80	81	82	84	80
Official	NA	NA	48	53	43	63	73	73	80	81	82	84	80
Administrative	NA	NA	48	54	43	63	73	73	80	81	82	84	80
Survey	59	NA	59	NA	NA	NA	74	NA	80	NA	NA	NA	NA

Description:

- 1997: Legacy estimate. Survey results (50 percent) adjusted for recall bias to 59 percent based on first dose card or history coverage (73 percent) and documented drop-out between first (52 percent) and third (42 percent) doses.
- 1998: Reported data (48 percent) calibrated to 1997 and 1999 levels.
- 1999: Estimate based on survey results. Reported data (48 percent) not consistent with survey results (59 percent). Survey results (45 percent) adjusted for recall bias to 59 percent based on first dose card or history coverage (69 percent) and documented drop-out between first (42 percent) and third (36 percent) doses.
- 2000: Reported data (53 percent) calibrated to 1999 and 2003 levels.
- 2001: Reported data (58 percent) calibrated to 1999 and 2003 levels. Missing or ignored reported value estimated by interpolation between reported values of 53 percent in 2000 and 63 percent in 2002. 2001 reported data (43 percent) ignored by working group. Decline in reported data attributed to incomplete reporting.
- 2002: Reported data (63 percent) calibrated to 1999 and 2003 levels.
- 2003: Estimate based on reported data (73 percent) confirmed by survey (74 percent). Survey results (65 percent) adjusted for recall bias to 74 percent based on first dose card or history coverage (83 percent) and documented drop-out between first (56 percent) and third (50 percent) doses.
- 2004: Estimate based on reported data. Survey results of 74 percent with sample size 0 ignored; sample size less than 300.
- 2005: Estimate based on reported data (80 percent) confirmed by survey (80 percent). Survey results (75 percent) adjusted for recall bias to 80 percent based on first dose card or history coverage (88 percent) and documented drop-out between first (65 percent) and third (59 percent) doses.
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data.

Cameroon - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	47	53	58	57	61	66	72	72	79	78	81	82	79
Reported	47	48	48	49	43	63	72	72	79	78	81	82	79
Official	NA	NA	48	49	43	63	72	72	79	78	81	82	79
Administrative	NA	NA	48	53	45	63	72	72	79	78	81	82	79
Survey	68	NA	72	NA	NA	NA	83	NA	80	NA	NA	NA	NA

Description:

1997: Legacy estimate. Survey results (47 percent) adjusted for recall bias to 68 percent based on first dose card or history coverage (84 percent) and documented drop-out between first (52 percent) and third (42 percent) doses.

1998: Reported data (48 percent) calibrated to 1997 and 1999 levels.

1999: Survey adjusted for recall likely includes SIAs; set to DTP3 coverage level. Survey results (50 percent) adjusted for recall bias to 72 percent based on first dose card or history coverage (86 percent) and documented drop-out between first (42 percent) and third (35 percent) doses.

2000: Reported data (49 percent) calibrated to 1999 and 2003 levels.

2001: Reported data (56 percent) calibrated to 1999 and 2003 levels. Missing or ignored reported value estimated by interpolation between reported values of 49 percent in 2000 and 63 percent in 2002. 2001 reported data (43 percent) ignored by working group. Decline in reported data attributed to incomplete reporting.

2002: Reported data (63 percent) calibrated to 1999 and 2003 levels.

2003: Vaccine to vaccine consistency Survey results (67 percent) adjusted for recall bias to 83 percent based on first dose card or history coverage (93 percent) and documented drop-out between first (56 percent) and third (50 percent) doses.

2004: Estimate based on reported data. Survey results of 73 percent with sample size 0 ignored; sample size less than 300.

2005: Estimate based on reported data (79 percent) confirmed by survey (80 percent). Survey results (70 percent) adjusted for recall bias to 80 percent based on first dose card or history coverage (93 percent) and documented drop-out between first (65 percent) and third (56 percent) doses.

2006: Estimate based on reported data.

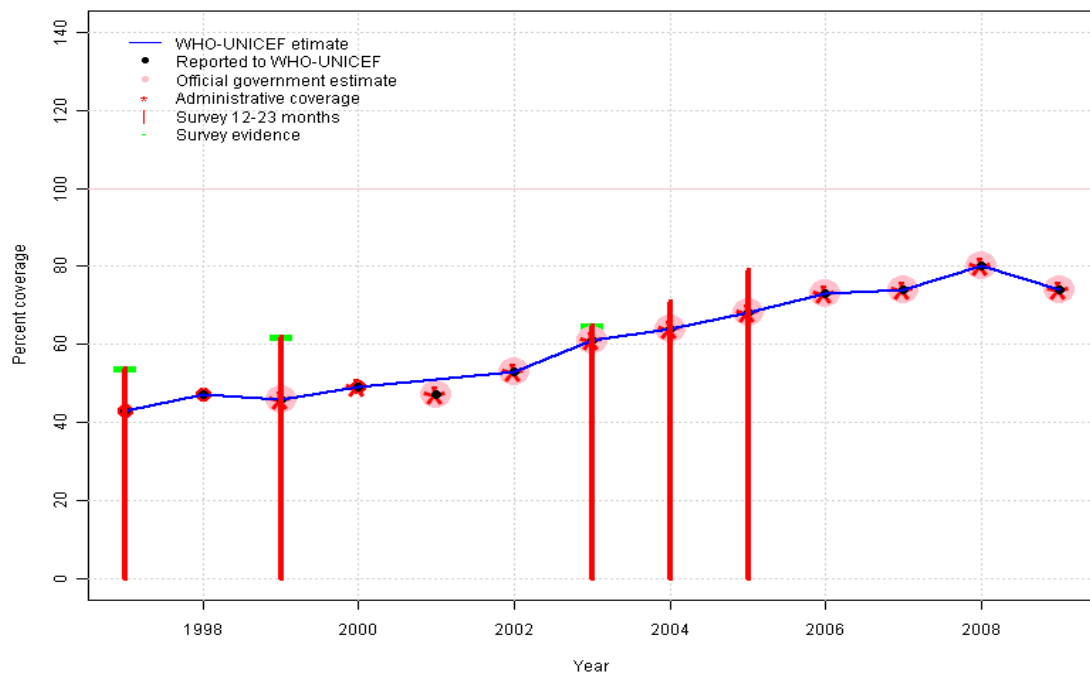
2007: Estimate based on reported data.

2008: Estimate based on reported data.

2009: Estimate based on reported data.

Cameroon - MCV

CMR - MCV



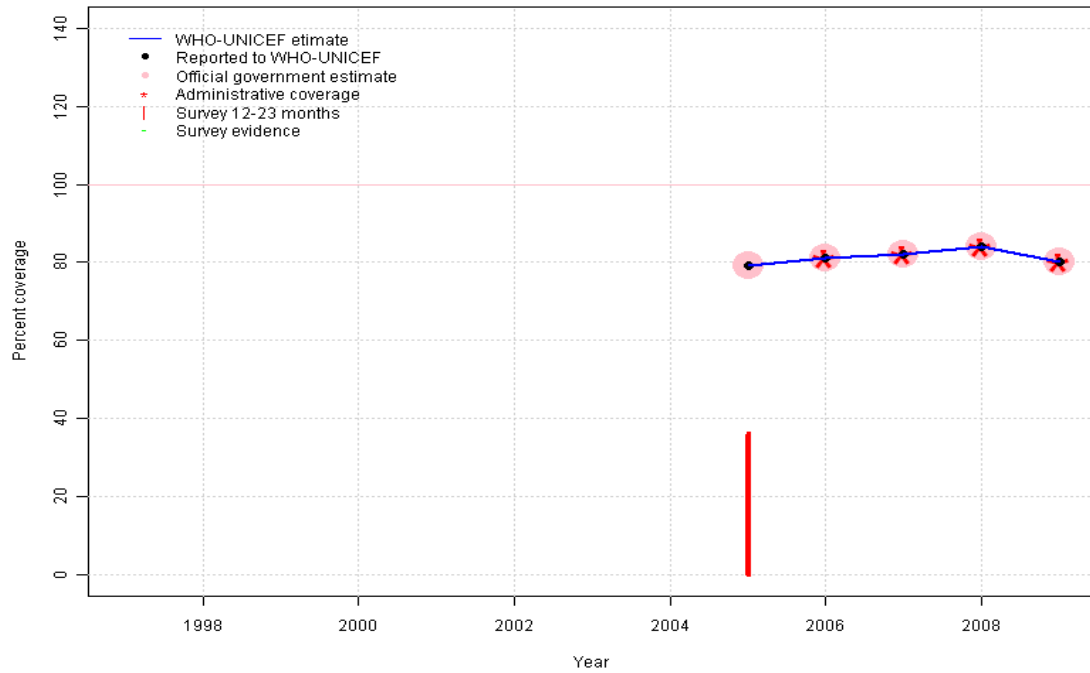
Description:

- 1997: Legacy estimate.
- 1998: Estimate based on reported data.
- 1999: Survey results most likely contain immunizations administered during measles campaigns.
- 2000: Estimate based on reported data.
- 2001: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 49 percent in 2000 and 53 percent in 2002. 2001 reported data (47 percent) ignored by working group. Decline in reported data attributed to incomplete reporting.
- 2002: Estimate based on reported data.
- 2003: Estimate based on reported data (61 percent) confirmed by survey (65 percent).
- 2004: Estimate based on reported data. Survey results of 71 percent with sample size 0 ignored; sample size less than 300.
- 2005: Estimate based on reported data. Survey results of 79 percent ignored by working group. Survey results most likely contain immunizations administered during measles campaigns.
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	43	47	46	49	51	53	61	64	68	73	74	80	74
Reported	43	47	46	49	47	53	61	64	68	73	74	80	74
Official	NA	NA	46	NA	47	53	61	64	68	73	74	80	74
Administrative	NA	NA	46	49	47	53	61	64	68	73	74	80	74
Survey	54	NA	62	NA	NA	NA	65	NA	NA	NA	NA	NA	NA

Cameroon - HepB3

CMR - HepB3



Description:

2005: Estimate based on reported data. Survey results of 36 percent ignored by working group. Hepatitis B vaccine introduced in 2005, HepB introduced in 2005 Vaccine presentation is DTP-HepB.

2006: Estimate based on reported data.

2007: Estimate based on reported data.

2008: Estimate based on reported data.

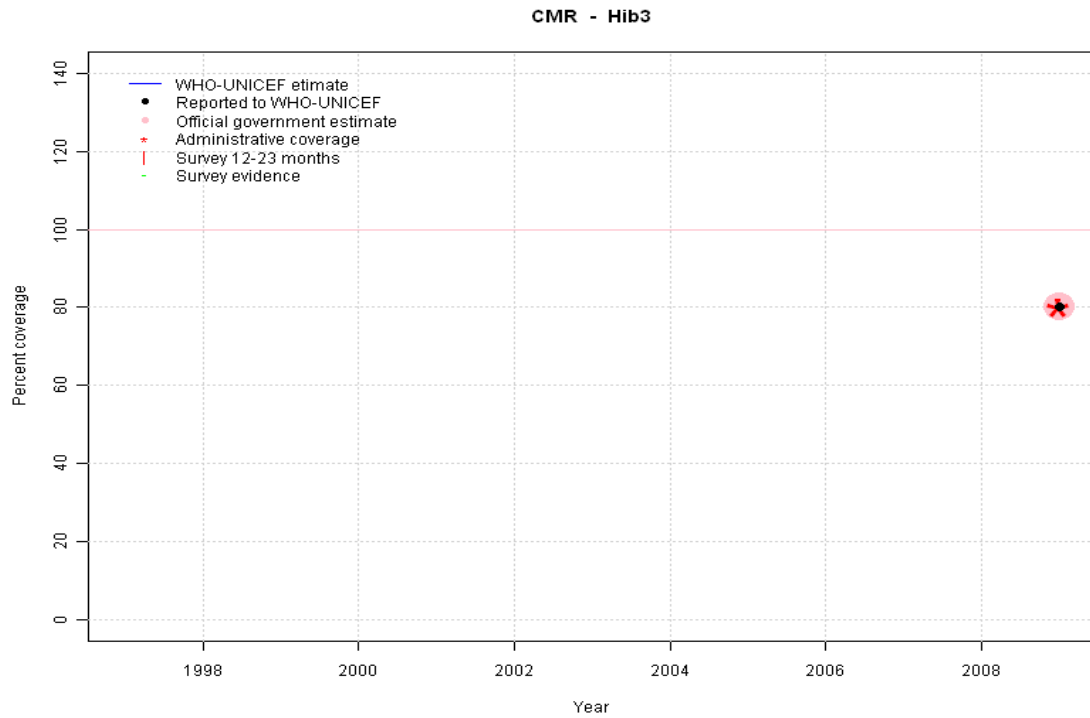
2009: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	79	81	82	84	80
Reported	NA	NA	NA	NA	NA	NA	NA	NA	79	81	82	84	80
Official	NA	NA	NA	NA	NA	NA	NA	NA	79	81	82	84	80
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	81	82	84	80
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Cameroon - Hib3

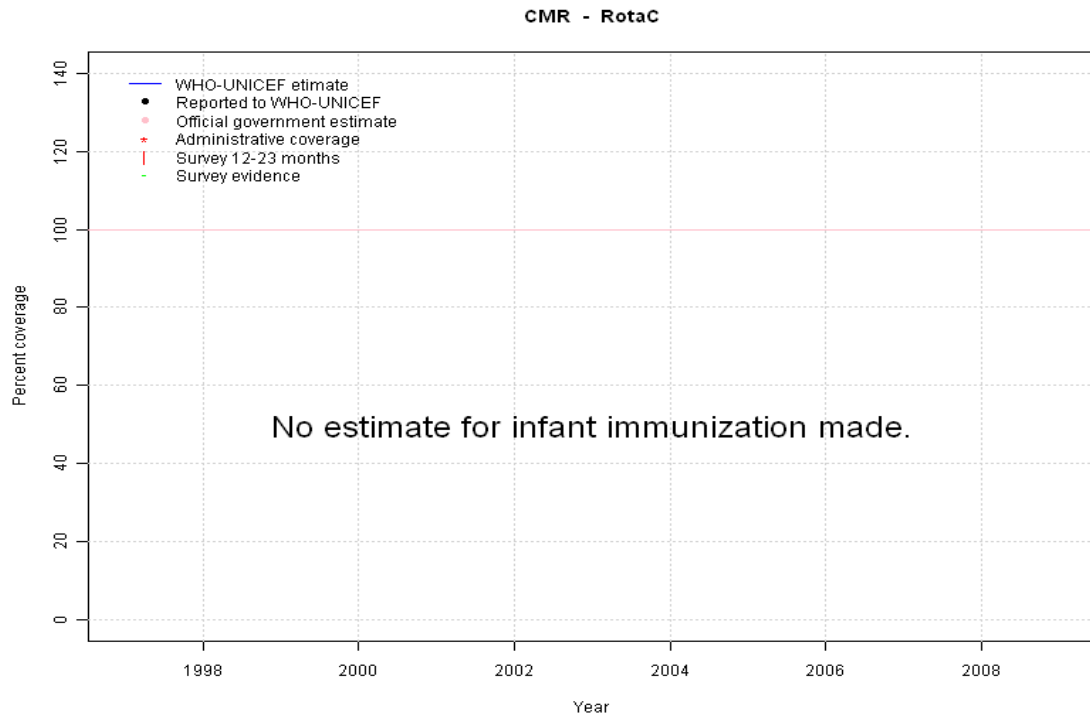
Description:

2009: Estimate based on reported data. Hib introduced in 2009 Vaccine presentation is DTP-HepB-Hib.



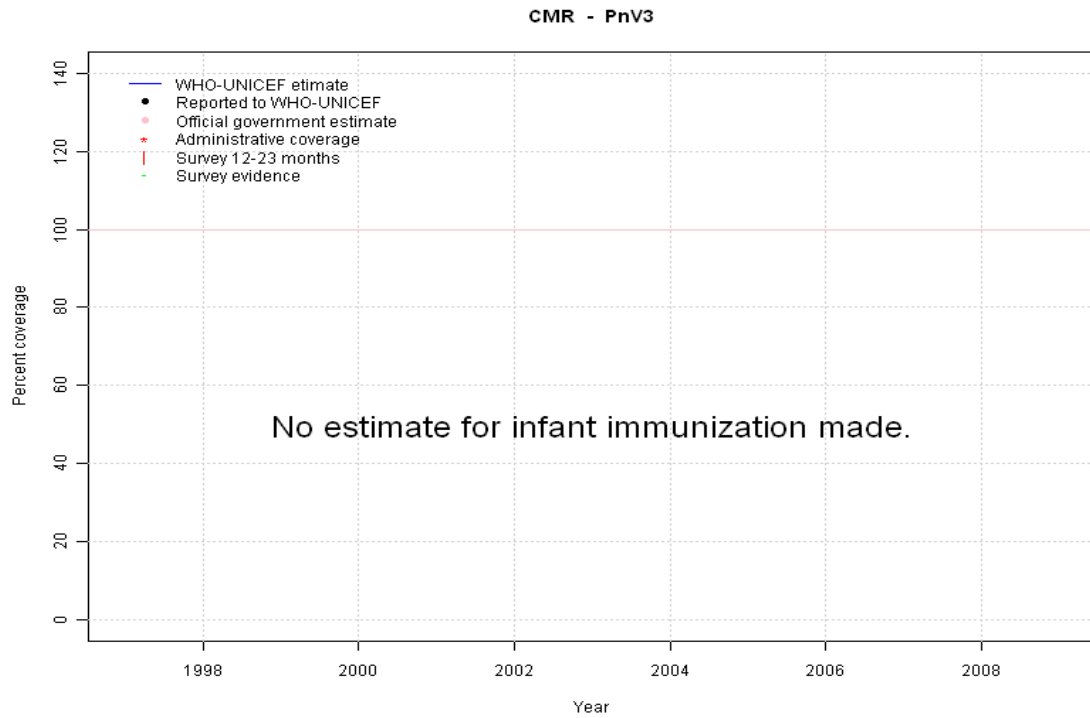
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	80
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	80
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	80
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	80
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Cameroon - 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

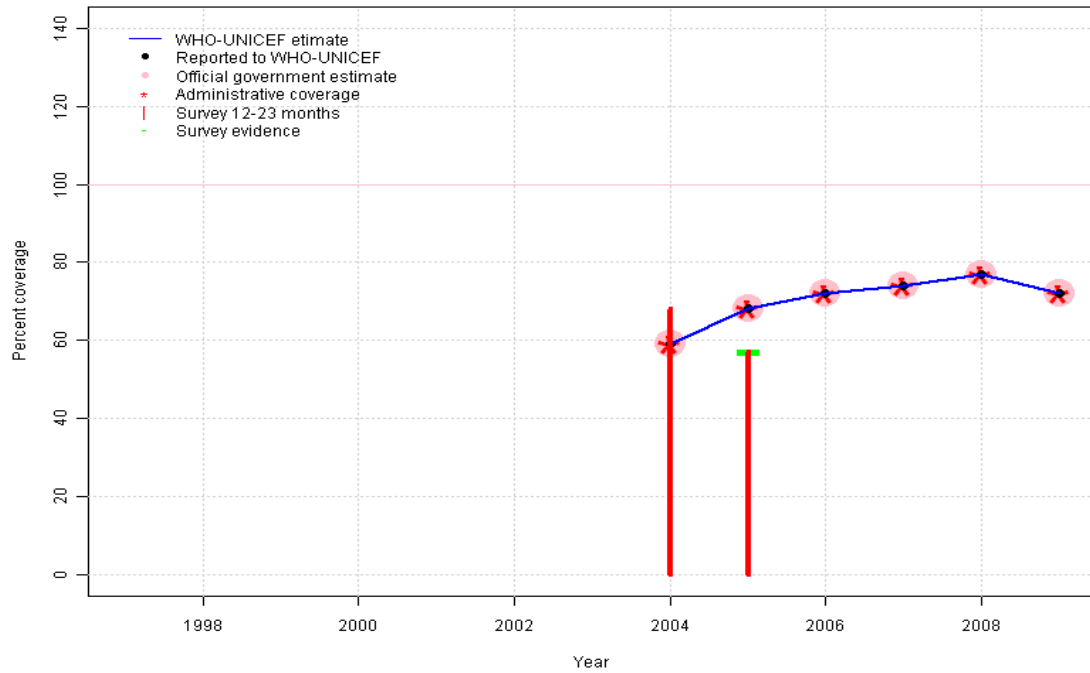
Cameroon - PnV3



	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

Cameroon - YFV

CMR - YFV



Description:

- 2004: Estimate based on trend in reported data. Survey results of 68 percent with sample size 0 ignored; sample size less than 300. YFV introduced in 2004
- 2005: Estimate based on reported data. Survey supports nationally reported data for other antigens.
- 2006: Estimate based on reported data.
- 2007: Estimate based on reported data.
- 2008: Estimate based on reported data.
- 2009: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	59	68	72	74	77	72
Reported	NA	NA	NA	NA	NA	NA	NA	59	68	72	74	77	72
Official	NA	NA	NA	NA	NA	NA	NA	59	68	72	74	77	72
Administrative	NA	NA	NA	NA	NA	NA	NA	59	68	72	74	77	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	57	NA	NA	NA	NA

Cameroon - survey details

2005 Cameroun, Enquête par grappes à indicateurs multiples
2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	65	12-23 m	1320	66
BCG	History	25	12-23 m	1320	66
BCG	Card or History	90	12-23 m	1320	66
BCG	C or H <12 months	89	12-23 m	1320	66
DTP1	C or H <12 months	87	12-23 m	1320	66
DTP1	Card	65	12-23 m	1320	66
DTP1	History	23	12-23 m	1320	66
DTP1	Card or History	88	12-23 m	1320	66
DTP3	History	16	12-23 m	1320	66
DTP3	Card or History	75	12-23 m	1320	66
DTP3	C or H <12 months	72	12-23 m	1320	66
DTP3	Card	59	12-23 m	1320	66
HepB1	C or H <12 months	39	12-23 m	1320	66
HepB1	Card or History	40	12-23 m	1320	66
HepB1	History	5	12-23 m	1320	66
HepB1	Card	35	CBAW	2834	66
HepB3	Card or History	36	12-23 m	1320	66
HepB3	C or H <12 months	34	12-23 m	1320	66
HepB3	History	5	12-23 m	1320	66
HepB3	Card	31	12-23 m	1320	66
MCV	Card	50	12-23 m	1320	66
MCV	C or H <12 months	72	12-23 m	1320	66
MCV	Card or History	79	12-23 m	1320	66
MCV	History	29	12-23 m	1320	66
Pol1	History	28	12-23 m	1320	66
Pol1	C or H <12 months	92	12-23 m	1320	66
Pol1	Card or History	93	12-23 m	1320	66
Pol1	Card	65	12-23 m	1320	66
Pol3	Card or History	70	12-23 m	1320	66
Pol3	Card	56	12-23 m	1320	66
Pol3	C or H <12 months	67	12-23 m	1320	66
Pol3	History	14	12-23 m	1320	66
YFV	C or H <12 months	54	12-23 m	1320	66
YFV	History	14	12-23 m	2834	66
YFV	Card or History	57	12-23 m	1320	66

YFV Card 44 12-23 m 1320 66

2004 Enquête nationale de couverture vaccinale des enfants de 12
à 23 mois au Cameroon

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	90	12-23 m	0	0
DTP1	Card or History	84	12-23 m	0	0
DTP3	Card or History	74	12-23 m	0	0
MCV	Card or History	71	12-23 m	0	0
Pol1	Card or History	88	12-23 m	0	0
Pol3	Card or History	73	12-23 m	0	0
YFV	Card or History	68	12-23 m	0	0

2003 L'Enquête Démographique et de Santé au Cameroun

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	56	12-23 m	1546	57
BCG	History	30	12-23 m	1546	57
BCG	Card or history	86	12-23 m	1546	57
BCG	C or H <12 months	85	12-23 m	1546	57
DTP1	Card	56	12-23 m	1546	57
DTP1	History	27	12-23 m	1546	57
DTP1	Card or history	83	12-23 m	1546	57
DTP1	C or H <12 months	81	12-23 m	1546	57
DTP3	C or H <12 months	63	12-23 m	1546	57
DTP3	History	16	12-23 m	1546	57
DTP3	Card or history	65	12-23 m	1546	57
DTP3	Card	50	12-23 m	1546	57
MCV	C or H <12 months	56	12-23 m	1546	57
MCV	Card or history	65	12-23 m	1546	57
MCV	History	21	12-23 m	1546	57
MCV	Card	44	12-23 m	1546	57
Pol1	History	37	12-23 m	1546	57
Pol1	Card or history	93	12-23 m	1546	57
Pol1	C or H <12 months	91	12-23 m	1546	57
Pol1	Card	56	12-23 m	1546	57

Cameroon - survey details

Pol3	Card or history	67	12-23 m	1546	57
Pol3	C or H <12 months	65	12-23 m	1546	57
Pol3	History	17	12-23 m	1546	57
Pol3	Card	50	12-23 m	1546	57
YFV	History	5	12-23 m	1546	57
YFV	Card or history	12	12-23 m	1546	57
YFV	C or H <12 months	7	12-23 m	1546	57
YFV	Card	7	12-23 m	1546	57

1999 Enquête à Indicateurs Multiples (MICS) au Cameroun 2000, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	41	12-23 m	661	49
BCG	Card or History	78	12-23 m	661	49
BCG	History	37	12-23 m	661	49
BCG	C or H <12 months	76	12-23 m	661	49
DTP1	History	27	12-23 m	661	49
DTP1	C or H <12 months	66	12-23 m	661	49
DTP1	Card or History	69	12-23 m	661	49
DTP1	Card	42	12-23 m	661	49
DTP3	C or H <12 months	43	12-23 m	661	49
DTP3	History	9	12-23 m	661	49
DTP3	Card or History	45	12-23 m	661	49
DTP3	Card	36	12-23 m	661	49
MCV	History	29	12-23 m	661	49
MCV	Card or History	62	12-23 m	661	49
MCV	Card	33	12-23 m	661	49
MCV	C or H <12 months	56	12-23 m	661	49
Pol1	C or H <12 months	83	12-23 m	661	49
Pol1	History	44	12-23 m	661	49
Pol1	Card	42	12-23 m	661	49
Pol1	Card or History	86	12-23 m	661	49
Pol3	C or H <12 months	47	12-23 m	661	49
Pol3	Card	35	12-23 m	661	49

Pol3	Card or History	50	12-23 m	661	49
Pol3	History	14	12-23 m	661	49

1997 Enquête Démographique et de Santé Cameroun 1998, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	History	25	12-23 m	748	55
BCG	Card or History	75	12-23 m	748	55
BCG	Card	50	12-23 m	748	55
BCG	C or H <12 months	72	12-23 m	748	55
DTP1	Card or History	73	12-23 m	748	55
DTP1	Card	52	12-23 m	748	55
DTP1	History	21	12-23 m	748	55
DTP1	C or H <12 months	70	12-23 m	748	55
DTP3	C or H <12 months	46	12-23 m	748	55
DTP3	Card	42	12-23 m	748	55
DTP3	Card or History	50	12-23 m	748	55
DTP3	History	9	12-23 m	748	55
MCV	History	16	12-23 m	748	55
MCV	C or H <12 months	44	12-23 m	748	55
MCV	Card	39	12-23 m	748	55
MCV	Card or History	54	12-23 m	748	55
Pol1	Card	52	12-23 m	748	55
Pol1	Card or History	84	12-23 m	748	55
Pol1	History	32	12-23 m	748	55
Pol1	C or H <12 months	80	12-23 m	748	55
Pol3	Card or History	47	12-23 m	748	55
Pol3	Card	42	12-23 m	748	55
Pol3	History	5	12-23 m	748	55
Pol3	C or H <12 months	42	12-23 m	748	55
YFV	C or H <12 months	4	12-23 m	748	55
YFV	Card	2	12-23 m	748	55
YFV	Card or History	6	12-23 m	748	55

Further information and estimates for 1980-1996 are available at:
http://www.childinfo.org/immunization_countryreports.html

Cameroon - survey details

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

Cameroon

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	40
1998	47
1999	55
2000	54
2001	52
2002	65
2003	71
2004	73
2005	76
2006	81
2007	83
2008	86
2009	91

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.