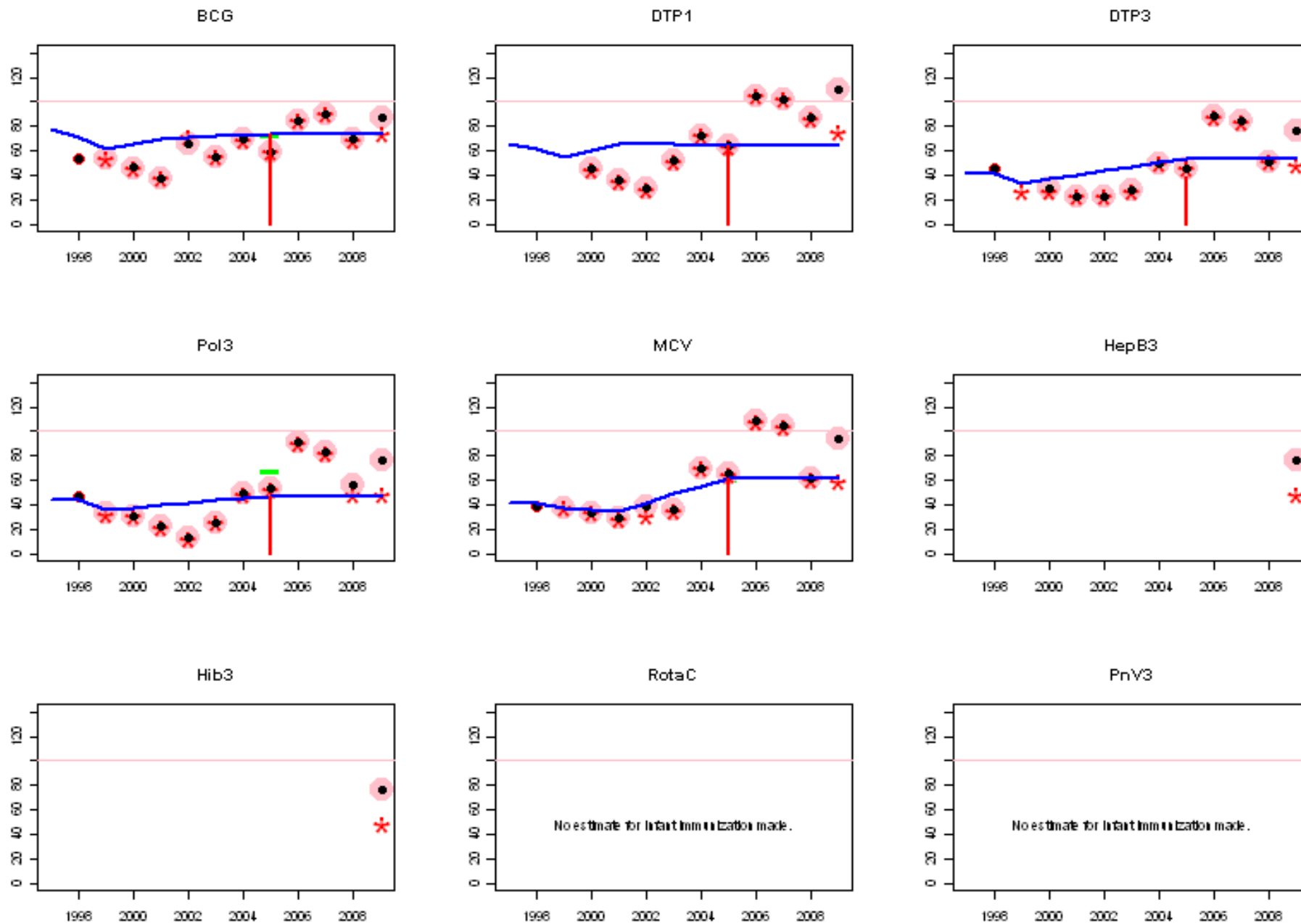
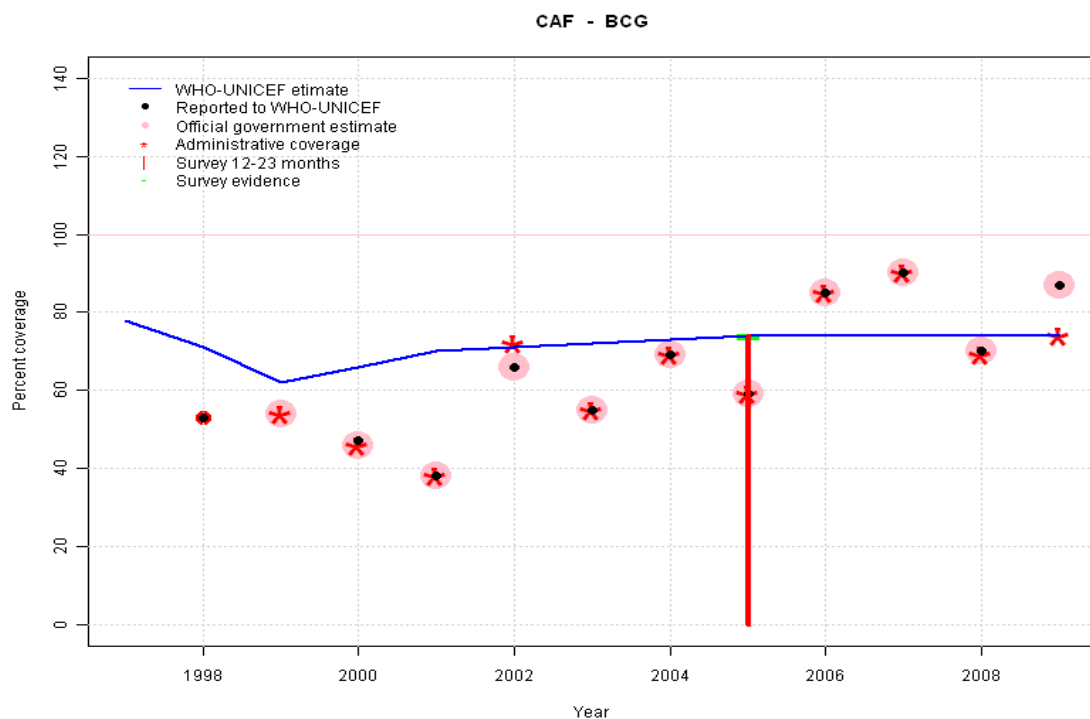


Central African Republic: WHO and UNICEF estimates of immunization coverage, 1997 - 2009



Central African Republic - BCG

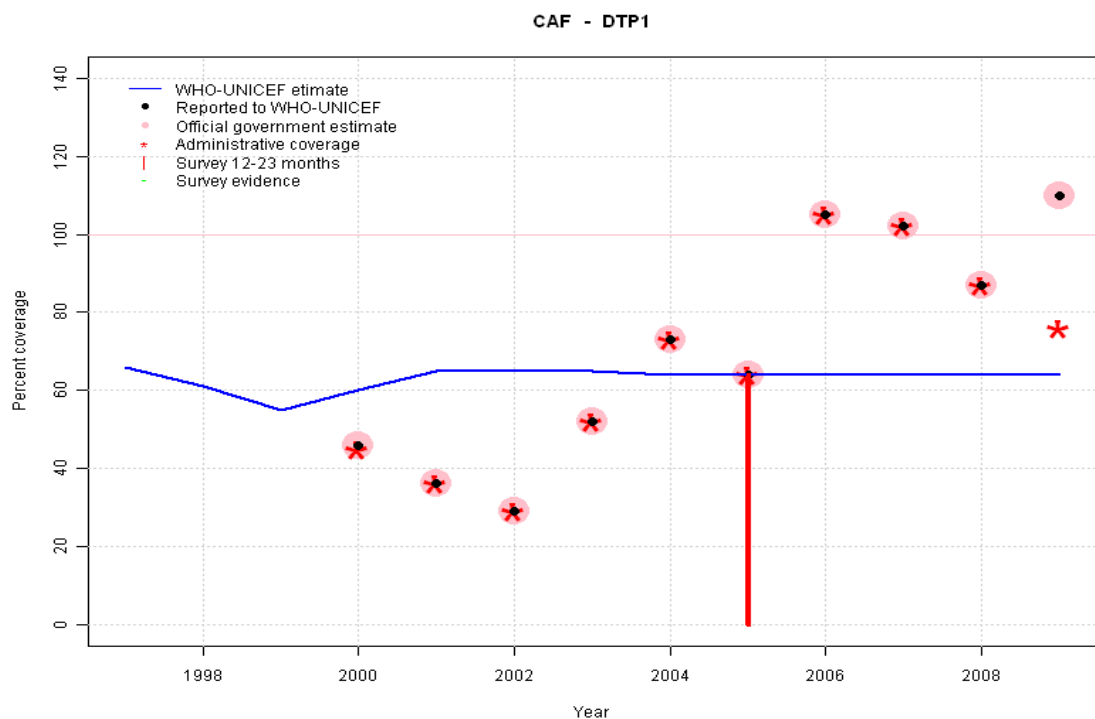


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	78	71	62	66	70	71	72	73	74	74	74	74	74
Reported	NA	53	NA	47	38	66	55	69	59	85	90	70	87
Official	NA	NA	54	46	38	66	55	69	59	85	90	70	87
Administrative	NA	NA	54	46	38	72	55	69	59	85	90	69	74
Survey	NA	NA	NA	NA	NA	NA	NA	NA	74	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Reported data (53 percent) calibrated to 1997 and 1999 levels.
- 1999: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.
- 2000: Estimate based on working group decision to interpolated between 1999 and 2001. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2001: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.
- 2002: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting. 2002 reported data (66 percent) inconsistent with data from other years.
- 2003: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting. 2003 reported data (55 percent) inconsistent with data from other years.
- 2004: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2005: Based on survey results for children vaccinated by 23 months of age.
- 2006: Estimate extrapolated from 2005 level (74 percent).
- 2007: Estimate extrapolated from 2005 level (74 percent).
- 2008: Estimate extrapolated from 2005 level (74 percent). 2008 reported data (70 percent) inconsistent with data from other years.
- 2009: Estimate extrapolated from 2005 level (74 percent). 2009 reported data (87 percent) inconsistent with data from other years.

Central African Republic - DTP1

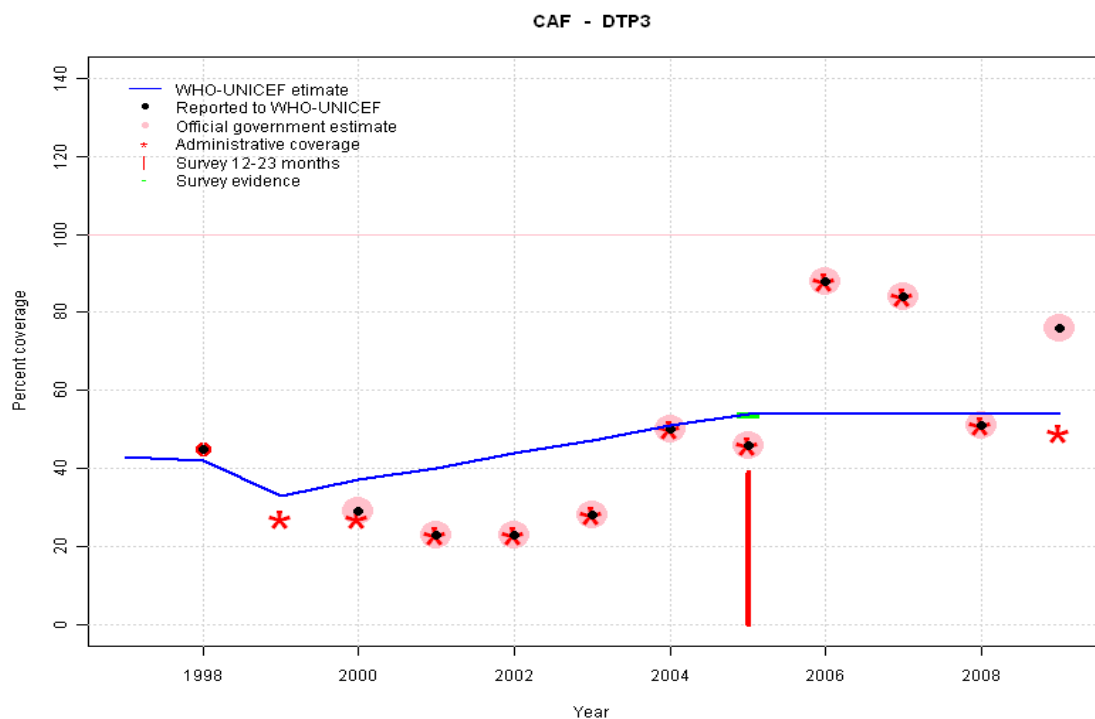


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	66	61	55	60	65	65	65	64	64	64	64	64	64
Reported	NA	NA	NA	46	36	29	52	73	64	105	102	87	110
Official	NA	NA	NA	46	36	29	52	73	64	105	102	87	110
Administrative	NA	NA	NA	45	36	29	52	73	64	105	102	87	76
Survey	NA	NA	NA	NA	NA	NA	NA	NA	64	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Estimate interpolated between 1997 and 1999 estimates.
- 1999: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.
- 2000: Estimate based on working group decision to interpolated between 1999 and 2001. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2001: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.
- 2002: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2003: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2004: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2005: Based on survey results for children vaccinated by 23 months of age.
- 2006: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2005 reported value of 64 percent. 2006 reported data (105 percent) ignored; greater than 100 percent.
- 2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2005 reported value of 64 percent. 2007 reported data (102 percent) ignored; greater than 100 percent.
- 2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2005 reported value of 64 percent. 2008 reported data (87 percent) inconsistent with data from other years.
- 2009: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2005 reported value of 64 percent. 2009 reported data (110 percent) ignored; greater than 100 percent. 2009 reported data (110 percent) inconsistent with data from other years.

Central African Republic - DTP3

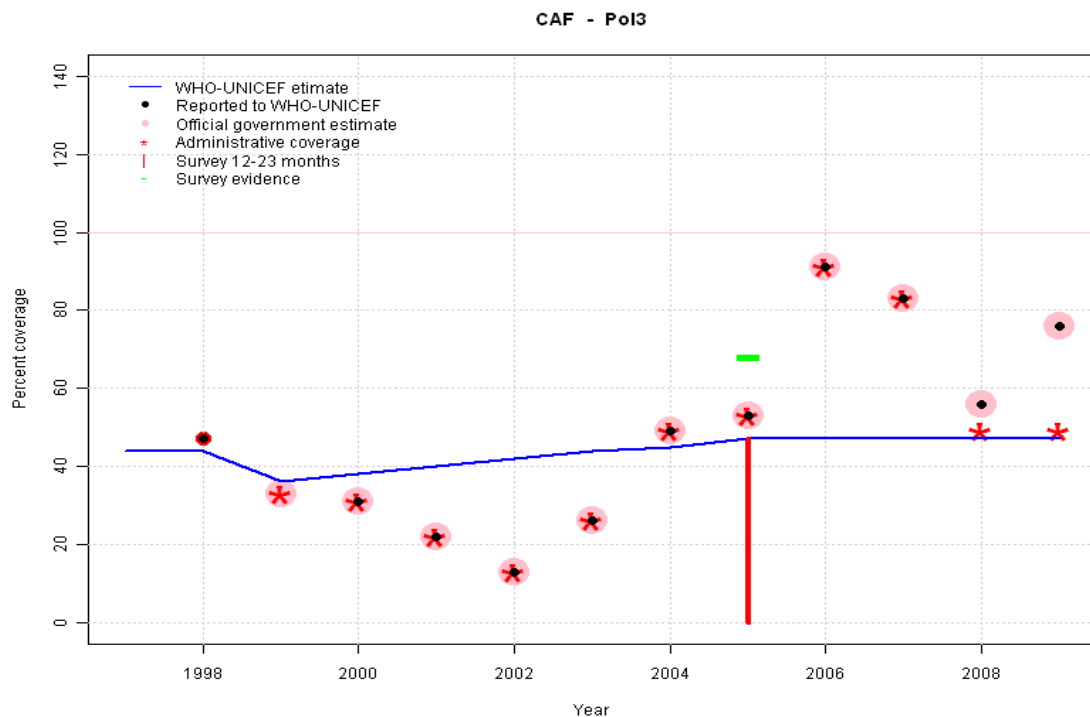


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	43	42	33	37	40	44	47	51	54	54	54	54	54
Reported	NA	45	NA	29	23	23	28	50	46	88	84	51	76
Official	NA	NA	NA	29	23	23	28	50	46	88	84	51	76
Administrative	NA	NA	27	27	23	23	28	50	46	88	84	51	49
Survey	NA	NA	NA	NA	NA	NA	NA	NA	54	NA	NA	NA	NA

Description:

- 1997: Legacy estimate.
- 1998: Reported data (45 percent) calibrated to 1997 and 1999 levels.
- 1999: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.
- 2000: Estimate based on working group decision to interpolated between 1999 and 2001. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2001: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.
- 2002: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2003: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2004: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2005: Based on survey results for children vaccinated by 23 months of age. Survey results (39 percent) adjusted for recall bias to 54 percent based on first dose card or history coverage (64 percent) and documented drop-out between first (32 percent) and third (27 percent) doses.
- 2006: Estimate extrapolated from 2005 level (54 percent).
- 2007: Estimate extrapolated from 2005 level (54 percent).
- 2008: Estimate extrapolated from 2005 level (54 percent). 2008 reported data (51 percent) inconsistent with data from other years.
- 2009: Estimate extrapolated from 2005 level (54 percent). 2009 reported data (76 percent) inconsistent with data from other years.

Central African Republic - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	44	44	36	38	40	42	44	45	47	47	47	47	47
Reported	NA	47	NA	31	22	13	26	49	53	91	83	56	76
Official	NA	NA	33	31	22	13	26	49	53	91	83	56	76
Administrative	NA	NA	33	31	22	13	26	49	53	91	83	49	49
Survey	NA	NA	NA	NA	NA	NA	NA	NA	68	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Reported data (47 percent) calibrated to 1997 and 1999 levels.

1999: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.

2000: Estimate based on working group decision to interpolated between 1999 and 2001. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.

2001: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.

2002: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.

2003: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.

2004: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.

2005: Based on survey results for children vaccinated by 23 months of age. Survey results (47 percent) adjusted for recall bias to 68 percent based on first dose card or history coverage (81 percent) and documented drop-out between first (32 percent) and third (27 percent) doses.

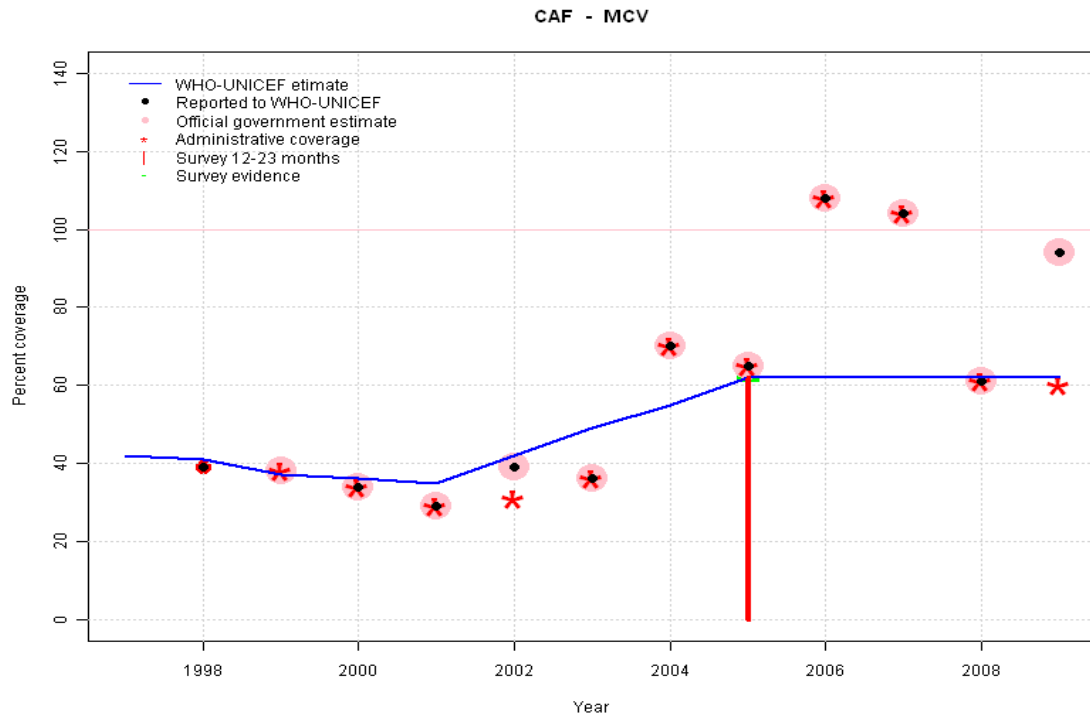
2006: Estimate extrapolated from 2005 level (47 percent).

2007: Estimate extrapolated from 2005 level (47 percent).

2008: Estimate extrapolated from 2005 level (47 percent). 2008 reported data (56 percent) inconsistent with data from other years.

2009: Estimate extrapolated from 2005 level (47 percent). 2009 reported data (76 percent) inconsistent with data from other years.

Central African Republic - MCV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	42	41	37	36	35	42	49	55	62	62	62	62	62
Reported	NA	39	NA	34	29	39	36	70	65	108	104	61	94
Official	NA	NA	38	34	29	39	36	70	65	108	104	61	94
Administrative	NA	NA	38	34	29	31	36	70	65	108	104	61	60
Survey	NA	NA	NA	NA	NA	NA	NA	NA	62	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Reported data (39 percent) calibrated to 1997 and 1999 levels.

1999: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.

2000: Estimate based on working group decision to interpolated between 1999 and 2001. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.

2001: Based on survey results for children vaccinated by 12 months of age. Results for children vaccinated by 23 months not available.

2002: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.

2003: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.

2004: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.

2005: Based on survey results for children vaccinated by 23 months of age.

2006: Estimate extrapolated from 2005 level (62 percent). 2006 reported data (108 percent) ignored; greater than 100 percent.

2007: Estimate extrapolated from 2005 level (62 percent). 2007 reported data (104 percent) ignored; greater than 100 percent.

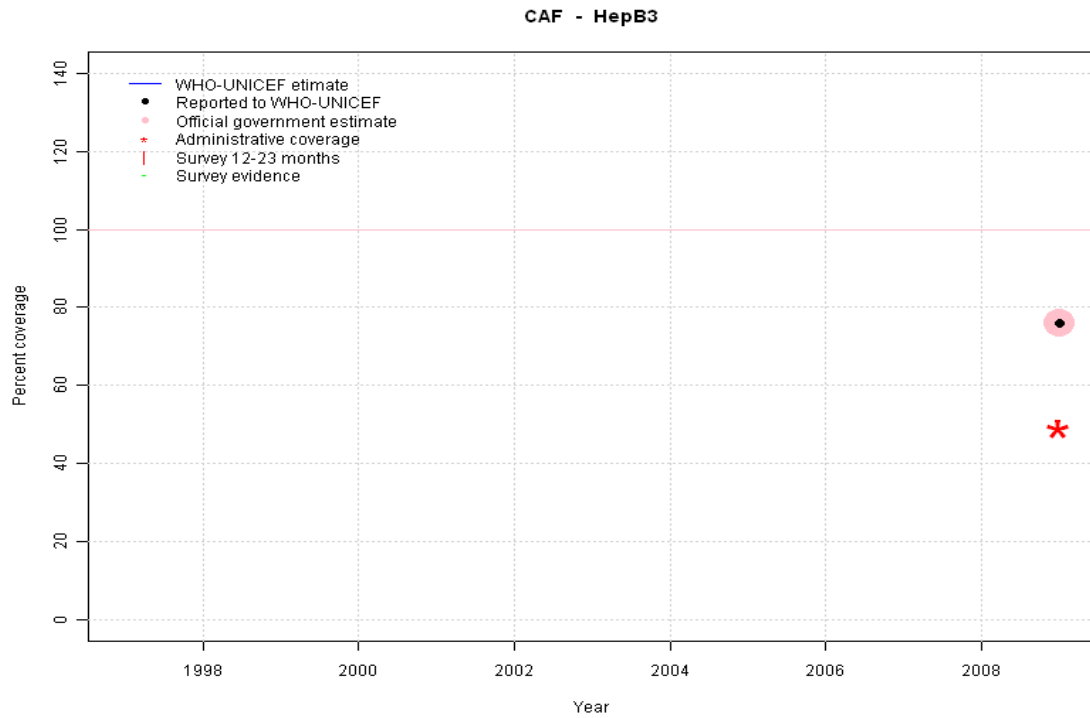
2008: Estimate extrapolated from 2005 level (62 percent). 2008 reported data (61 percent) inconsistent with data from other years.

2009: Estimate extrapolated from 2005 level (62 percent). 2009 reported data (94 percent) inconsistent with data from other years.

Central African Republic - HepB3

Description:

2009: Estimate follows DTP3 coverage levels. HepB introduced in 2008. Reporting started in 2009. Vaccine presentation is DTP-HepB-Hib.

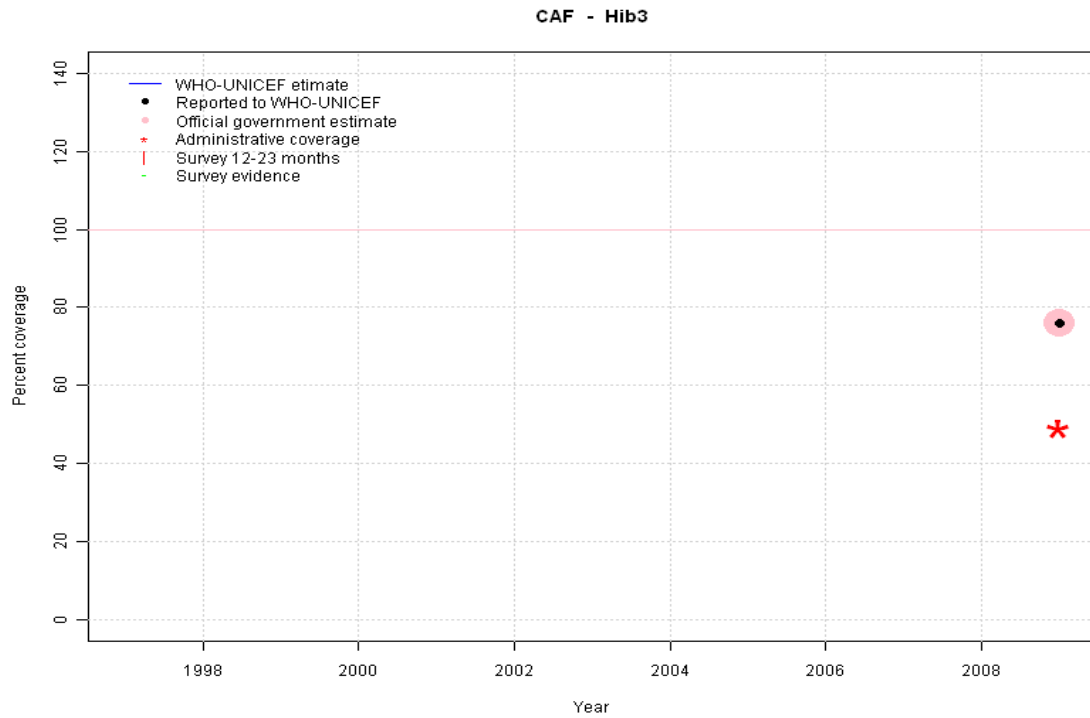


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	76
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	76
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	49
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Central African Republic - Hib3

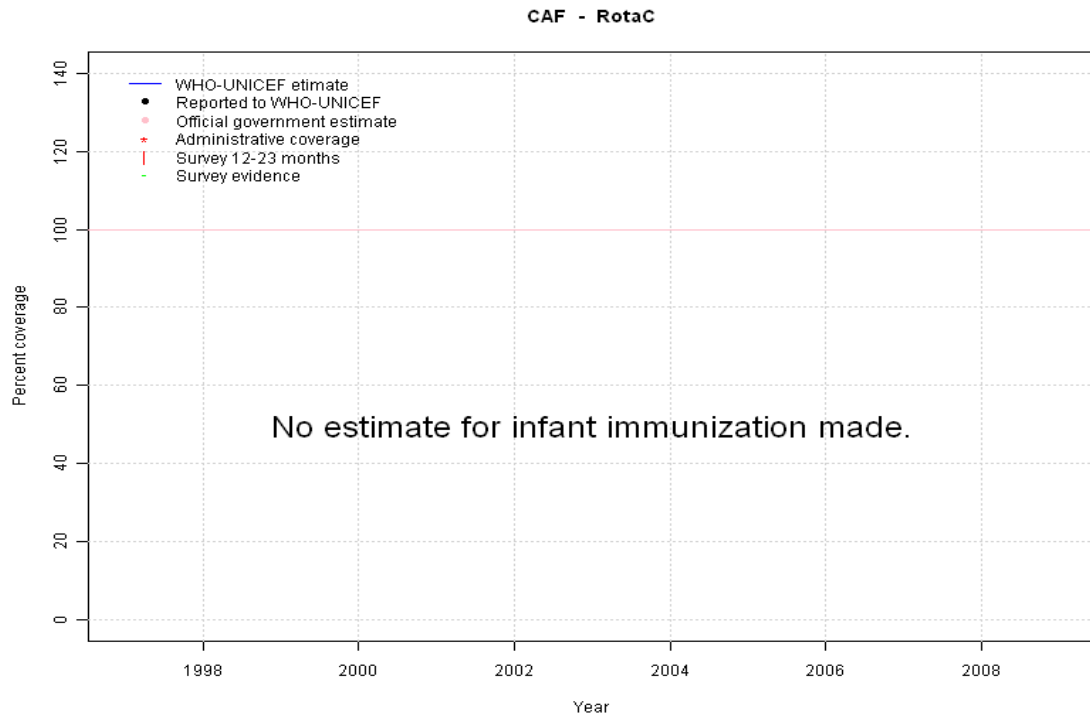
Description:

2009: Estimate follows DTP3 coverage levels. Hib introduced in 2008. Reporting started in 2009. Vaccine presentation is DTP-HepB-Hib.



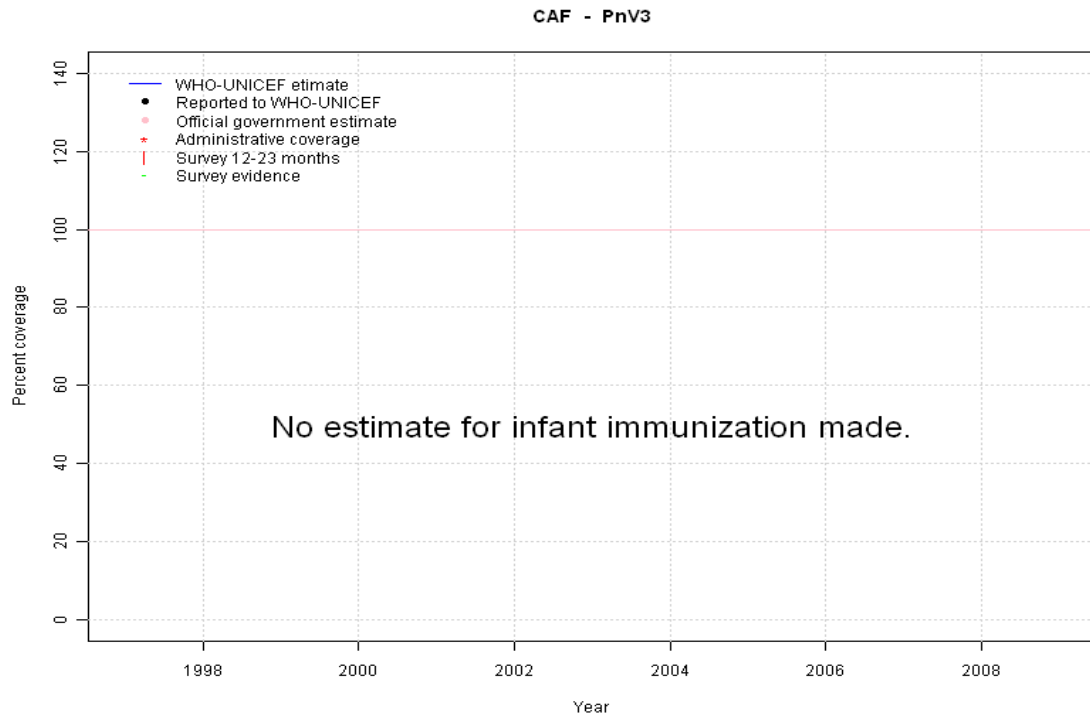
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	76
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	76
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	49
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Central African Republic - RotaC



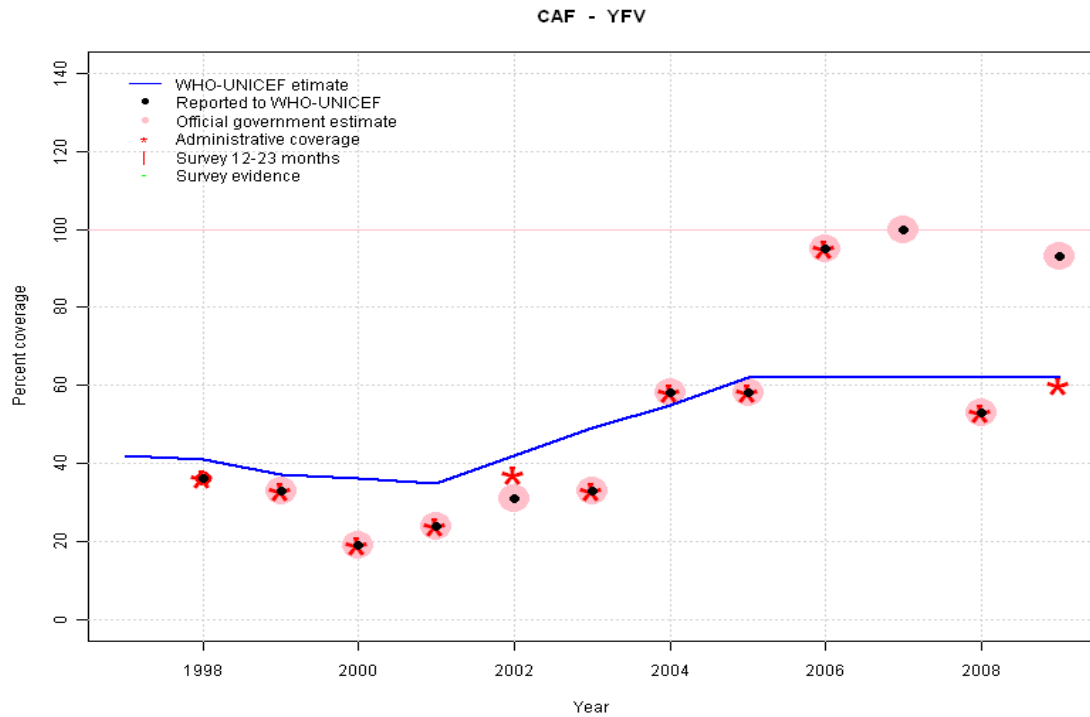
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA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

Central African Republic - 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

Central African Republic - YFV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	42	41	37	36	35	42	49	55	62	62	62	62	62
Reported	NA	36	33	19	24	31	33	58	58	95	100	53	93
Official	NA	NA	33	19	24	31	33	58	58	95	100	53	93
Administrative	NA	36	33	19	24	37	33	58	58	95	NA	53	60
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Description:

- 1997: Estimate follows MCV coverage levels.
- 1998: Estimate follows MCV coverage levels.
- 1999: Estimate follows MCV coverage levels.
- 2000: Estimate based on working group decision to interpolated between 1999 and 2001. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2001: Estimate follows MCV coverage levels.
- 2002: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2003: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2004: Estimate based on working group decision to interpolated between 2001 and 2005. Estimate based on interpolation between survey results. Immunization records prior to 2003 were compromised during 2002-2003 civil unrest. Fluctuation in nationally reported data suggests poor recording and reporting.
- 2005: Estimate follows MCV coverage levels.
- 2006: Estimate follows MCV coverage levels.
- 2007: Estimate follows MCV coverage levels.
- 2008: Estimate follows MCV coverage levels. 2008 reported data (53 percent) inconsistent with data from other years.
- 2009: Estimate extrapolated from 2008 level (62 percent). 2009 reported data (93 percent) inconsistent with data from other years.

Central African Republic - survey details

2005 République Centrafricaine, Enquête par Grappe à Indicateurs Multiples, couplée avec la Sérologie VIH et Anémie, 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	34	12-23 m	1844	37
BCG	History	40	12-23 m	1844	37
BCG	Card or History	74	12-23 m	1844	37
BCG	C or H <12 months	71	12-23 m	1844	37
DTP1	Card or History	64	12-23 m	1844	37
DTP1	History	32	12-23 m	1844	37
DTP1	C or H <12 months	60	12-23 m	1844	37
DTP1	Card	32	12-23 m	1844	37
DTP3	C or H <12 months	34	12-23 m	1844	37
DTP3	Card or History	39	12-23 m	1844	37
DTP3	History	12	12-23 m	1844	37
DTP3	Card	27	12-23 m	1844	37
MCV	C or H <12 months	50	12-23 m	1844	37
MCV	Card or History	62	12-23 m	1844	37
MCV	History	34	12-23 m	1844	37
MCV	Card	28	12-23 m	1844	37
Pol1	C or H <12 months	75	12-23 m	1844	37
Pol1	History	48	12-23 m	1844	37
Pol1	Card or History	81	12-23 m	1844	37
Pol1	Card	32	12-23 m	1844	37
Pol3	Card or History	47	12-23 m	1844	37
Pol3	Card	27	12-23 m	1844	37
Pol3	C or H <12 months	40	12-23 m	1844	37

Pol3 History 20 12-23 m 1844 37

2001 Rapport Final de la Revue externe du PEV en Republique Centrafricaine 2002

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	70	12-23 m	0	58
DTP1	C or H <12 months	65	12-23 m	0	58
DTP3	C or H <12 months	40	12-23 m	0	58
MCV	C or H <12 months	35	12-23 m	0	58
Pol1	C or H <12 months	63	12-23 m	0	58
Pol3	C or H <12 months	40	12-23 m	0	58

1999 Enquête à Indicateurs Multiples en Republique Centrafricaine, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	62	12-23 m	2932	39
DTP1	C or H <12 months	55	12-23 m	2932	39
DTP3	C or H <12 months	33	12-23 m	2932	39
MCV	C or H <12 months	37	12-23 m	2932	39
Pol1	C or H <12 months	66	12-23 m	2932	39
Pol3	C or H <12 months	36	12-23 m	2932	39

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

Central African Republic

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	29
1998	24
1999	38
2000	36
2001	34
2002	31
2003	32
2004	35
2005	48
2006	52
2007	54
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.