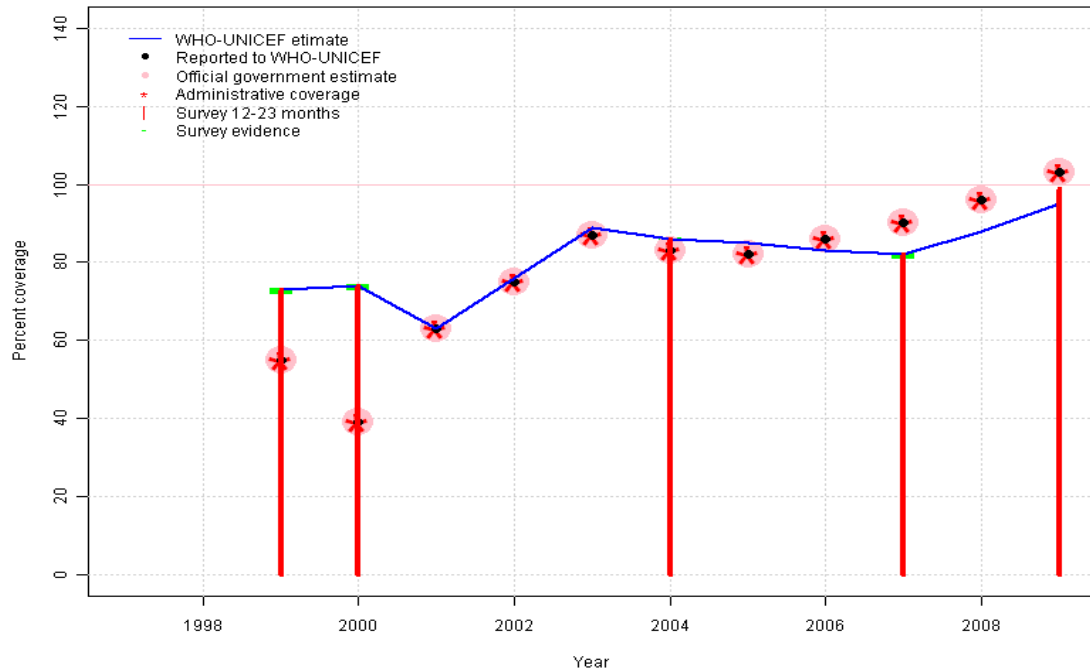


Sierra Leone - BCG

SLE - BCG

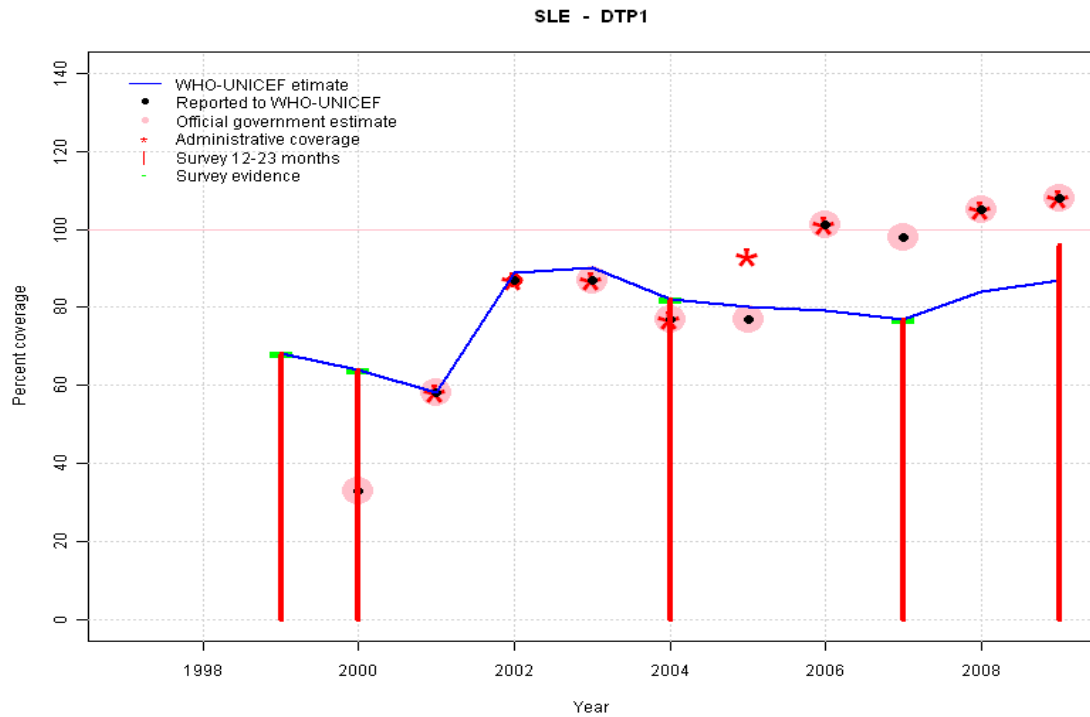


Description:

- 1999: Estimate based on survey results. Reported data (55 percent) not consistent with survey results (73 percent).
- 2000: Estimate based on survey results. Reported data (59 percent) not consistent with survey results (74 percent). 2000 reported data (39 percent) inconsistent with data from other years.
- 2001: Estimate is based on the reported data.
- 2002: Reported data (75 percent) calibrated to 2001 and 2004 levels.
- 2003: Reported data (87 percent) calibrated to 2001 and 2004 levels.
- 2004: Estimate is based on survey results.
- 2005: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting.
- 2006: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting.
- 2007: Estimate is based on survey results.
- 2008: Estimate based on reported data adjusted to level of 2007 survey.
- 2009: Estimate based on reported data adjusted to level of 2007 survey. Survey results of 99 percent with sample size 0 ignored; sample size less than 300. 2009 reported data (103 percent) ignored; greater than 100 percent.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	73	74	63	76	89	86	85	83	82	88	95
Reported	NA	NA	55	39	63	75	87	83	82	86	90	96	103
Official	NA	NA	55	39	63	75	87	83	82	86	90	96	103
Administrative	NA	NA	55	39	63	75	87	83	82	86	90	96	103
Survey	NA	NA	73	74	NA	NA	NA	86	NA	NA	82	NA	NA

Sierra Leone - DTP1

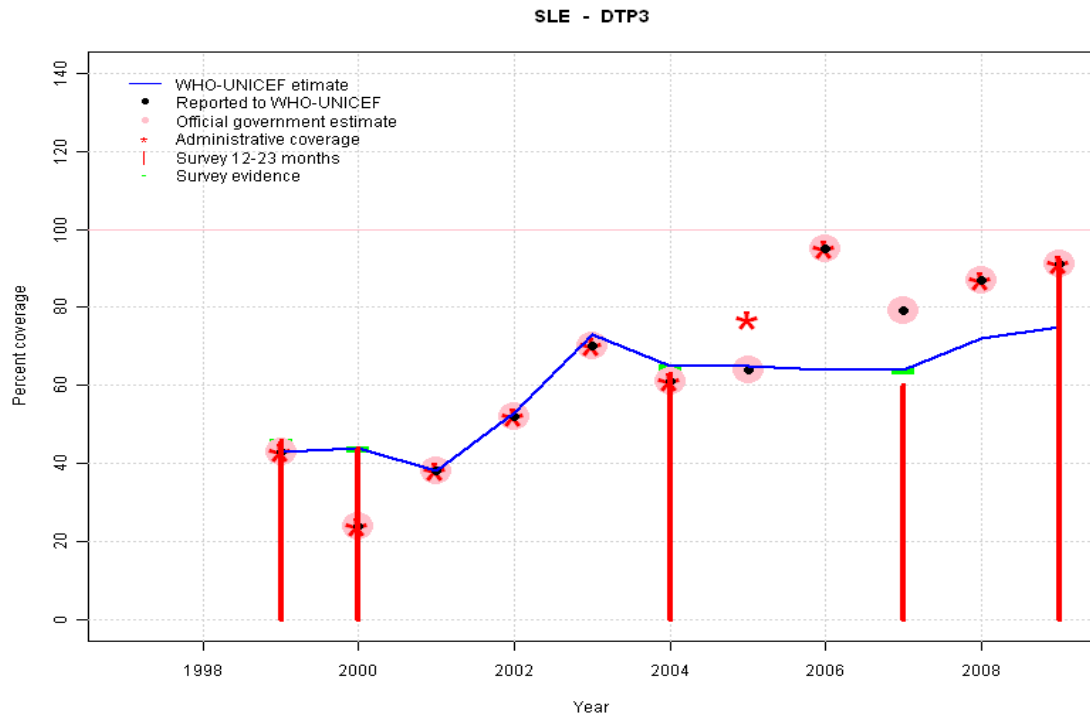


Description:

- 1999: Estimate based on survey results. Reported data (33 percent) not consistent with survey results (68 percent).
- 2000: Estimate based on survey results. Reported data (33 percent) not consistent with survey results (64 percent).
- 2001: Estimate is based on the reported data.
- 2002: Reported data (87 percent) calibrated to 2001 and 2004 levels.
- 2003: Reported data (87 percent) calibrated to 2001 and 2004 levels.
- 2004: Estimate is based on survey results.
- 2005: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting.
- 2006: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting. 2006 reported data (101 percent) ignored; greater than 100 percent.
- 2007: Estimate based on survey results. Reported data (98 percent) not consistent with survey results (77 percent).
- 2008: Estimate based on reported data adjusted to level of 2007 survey. 2008 reported data (105 percent) ignored; greater than 100 percent.
- 2009: Estimate based on reported data adjusted to level of 2007 survey. Survey results of 96 percent with sample size 0 ignored; sample size less than 300. 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	68	64	58	89	90	82	80	79	77	84	87
Reported	NA	NA	NA	33	58	87	87	77	77	101	98	105	108
Official	NA	NA	NA	33	58	NA	87	77	77	101	98	105	108
Administrative	NA	NA	NA	NA	58	87	87	77	93	101	NA	105	108
Survey	NA	NA	68	64	NA	NA	NA	82	NA	NA	77	NA	NA

Sierra Leone - DTP3

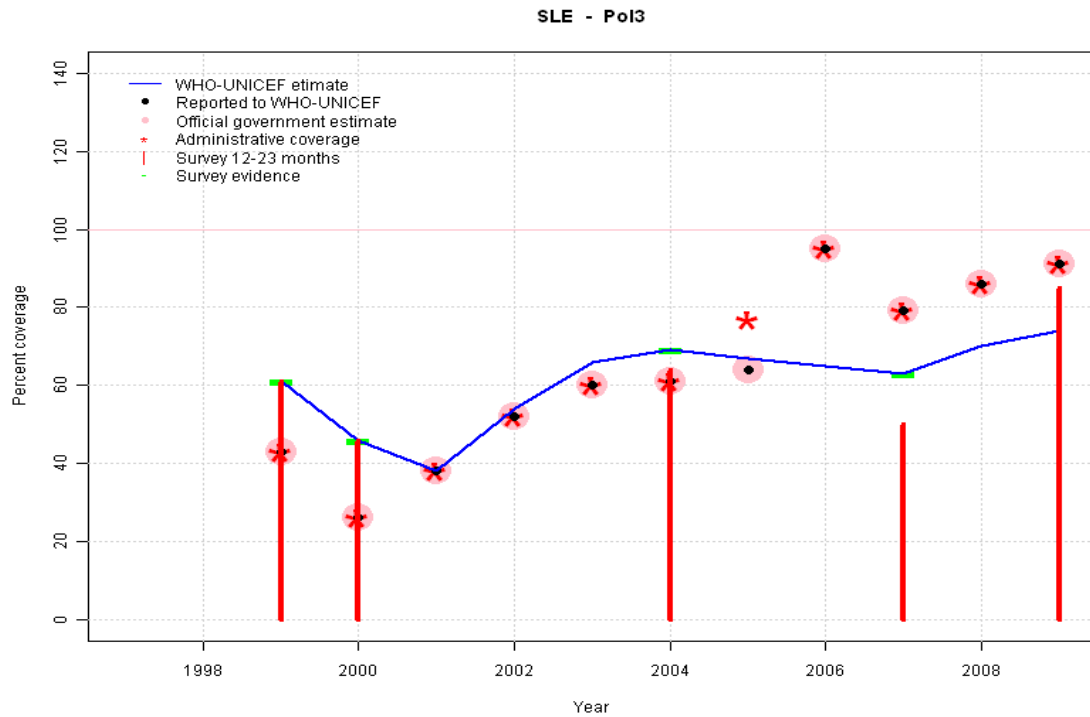


Description:

- 1999: Estimate based on reported data (43 percent) confirmed by survey (46 percent).
- 2000: Estimate is based on survey results. 2000 reported data (24 percent) inconsistent with data from other years.
- 2001: Estimate is based on the reported data.
- 2002: Reported data (52 percent) calibrated to 2001 and 2004 levels.
- 2003: Reported data (70 percent) calibrated to 2001 and 2004 levels.
- 2004: Estimate is based on survey results. Survey results (63 percent) adjusted for recall bias to 65 percent based on first dose card or history coverage (82 percent) and documented drop-out between first (47 percent) and third (37 percent) doses.
- 2005: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting.
- 2006: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting. 2006 reported data (95 percent) inconsistent with data from other years.
- 2007: Estimate based on survey results. Reported data (79 percent) not consistent with survey results (64 percent). Survey results (60 percent) adjusted for recall bias to 64 percent based on first dose card or history coverage (77 percent) and documented drop-out between first (55 percent) and third (46 percent) doses.
- 2008: Reported data (87 percent) calibrated to 2007 and 2009 levels.
- 2009: Estimate based on reported data adjusted to level of 2007 survey. Survey results of 92 percent with sample size 0 ignored; sample size less than 300.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	43	44	38	53	73	65	65	64	64	72	75
Reported	NA	NA	43	24	38	52	70	61	64	95	79	87	91
Official	NA	NA	43	24	38	52	70	61	64	95	79	87	91
Administrative	NA	NA	43	24	38	52	70	61	77	95	NA	87	91
Survey	NA	NA	46	44	NA	NA	NA	65	NA	NA	64	NA	NA

Sierra Leone - Pol3

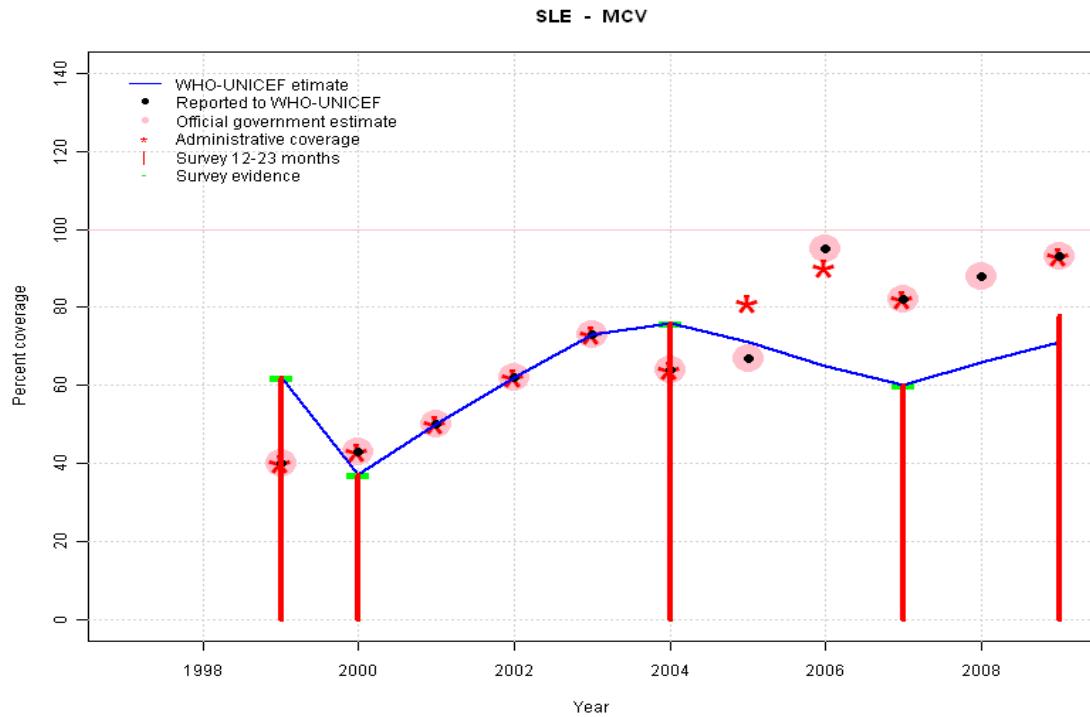


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	61	46	38	54	66	69	67	65	63	70	74
Reported	NA	NA	43	26	38	52	60	61	64	95	79	86	91
Official	NA	NA	43	26	38	52	60	61	64	95	79	86	91
Administrative	NA	NA	43	26	38	52	60	61	77	95	79	86	91
Survey	NA	NA	61	46	NA	NA	NA	69	NA	NA	63	NA	NA

Description:

- 1999: Estimate based on survey results. Reported data (43 percent) not consistent with survey results (61 percent).
- 2000: Estimate is based on survey results. 2000 reported data (26 percent) inconsistent with data from other years.
- 2001: Estimate is based on the reported data.
- 2002: Reported data (52 percent) calibrated to 2001 and 2004 levels.
- 2003: Reported data (60 percent) calibrated to 2001 and 2004 levels.
- 2004: Estimate is based on survey results. Survey results (64 percent) adjusted for recall bias to 69 percent based on first dose card or history coverage (87 percent) and documented drop-out between first (48 percent) and third (38 percent) doses.
- 2005: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting.
- 2006: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting. 2006 reported data (95 percent) inconsistent with data from other years.
- 2007: Estimate based on survey results. Reported data (79 percent) not consistent with survey results (63 percent). Survey results (50 percent) adjusted for recall bias to 63 percent based on first dose card or history coverage (76 percent) and documented drop-out between first (53 percent) and third (44 percent) doses.
- 2008: Reported data (86 percent) calibrated to 2007 and 2009 levels.
- 2009: Estimate based on reported data adjusted to level of 2007 survey. Survey results of 85 percent with sample size 0 ignored; sample size less than 300.

Sierra Leone - MCV



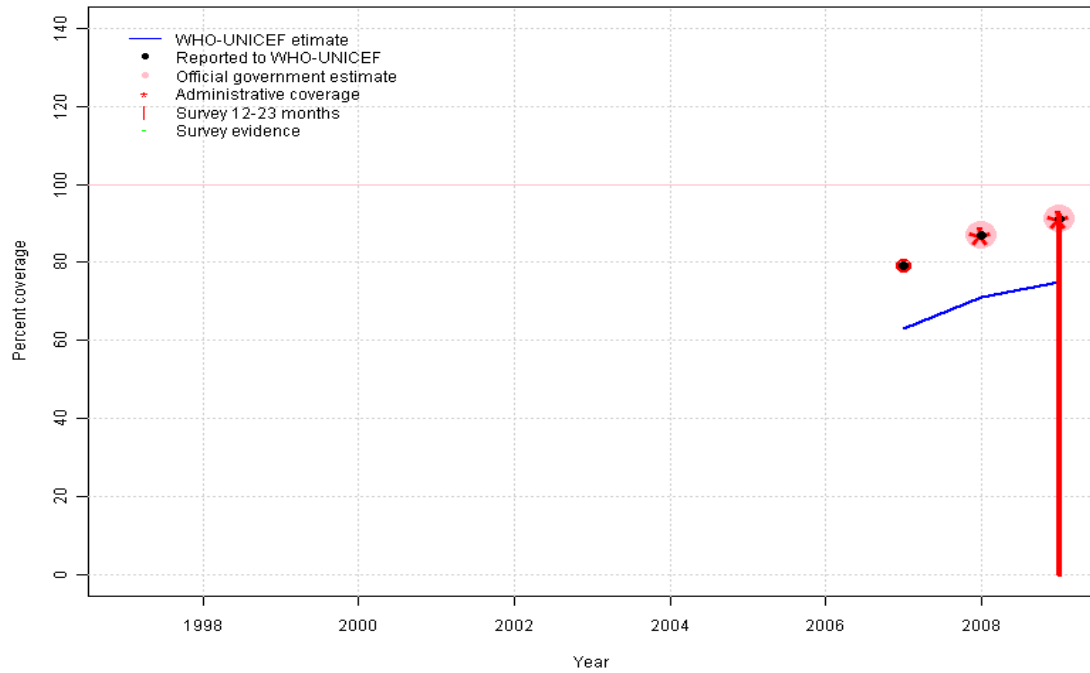
Description:

- 1999: Estimate based on survey results. Reported data (40 percent) not consistent with survey results (62 percent).
- 2000: Estimate is based on survey results.
- 2001: Estimate is based on the reported data.
- 2002: Estimate based on reported data.
- 2003: Estimate is based on the reported data.
- 2004: Estimate based on survey results. Reported data (64 percent) not consistent with survey results (76 percent).
- 2005: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting.
- 2006: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting. 2006 reported data (95 percent) inconsistent with data from other years.
- 2007: Estimate based on survey results. Reported data (82 percent) not consistent with survey results (60 percent).
- 2008: Reported data (88 percent) calibrated to 2007 and 2009 levels.
- 2009: Estimate based on reported data adjusted to level of 2007 survey. Survey results of 78 percent with sample size 0 ignored; sample size less than 300.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	62	37	50	62	73	76	71	65	60	66	71
Reported	NA	NA	40	43	50	62	73	64	67	95	82	88	93
Official	NA	NA	40	43	50	62	73	64	67	95	82	88	93
Administrative	NA	NA	40	43	50	62	73	64	81	90	82	NA	93
Survey	NA	NA	62	37	NA	NA	NA	76	NA	NA	60	NA	NA

Sierra Leone - HepB3

SLE - HepB3



Description:

2007: Estimate follows DTP3 coverage levels. HepB introduced in 2007 Vaccine presentation is DTP-HepB-Hib.

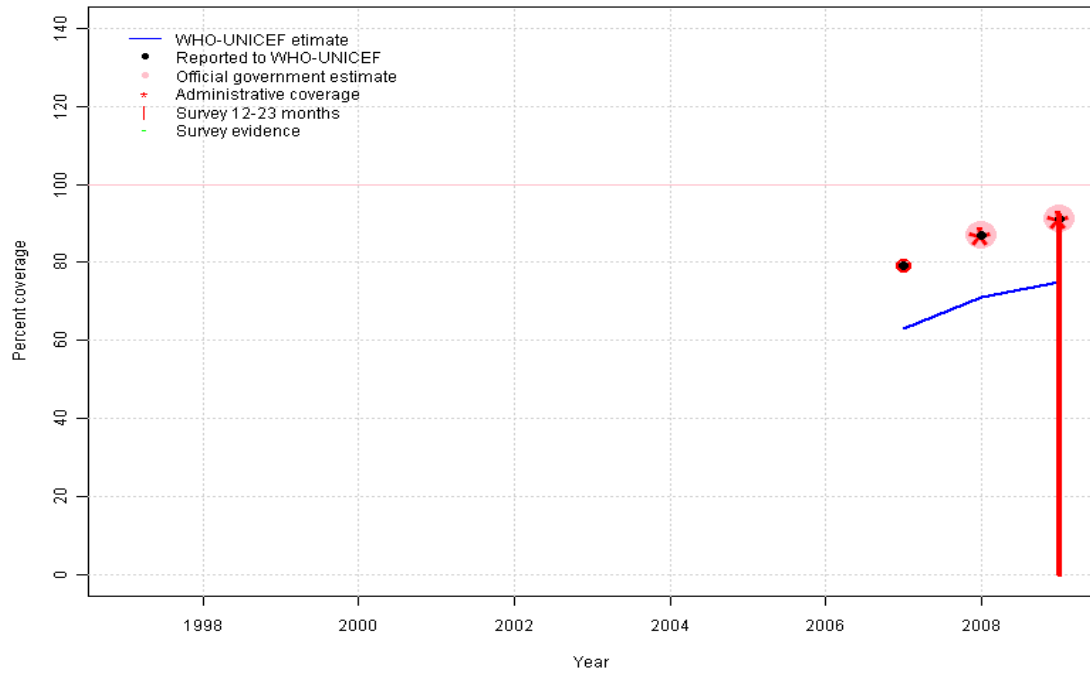
2008: Reported data (87 percent) calibrated to 2007 and 2009 levels.

2009: Estimate based on reported data adjusted to dtp3 level of 2007 survey. Survey results of 92 percent with sample size 0 ignored; sample size less than 300.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63	71	75
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	79	87	91
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	87	91
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	87	91
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Sierra Leone - Hib3

SLE - Hib3



Description:

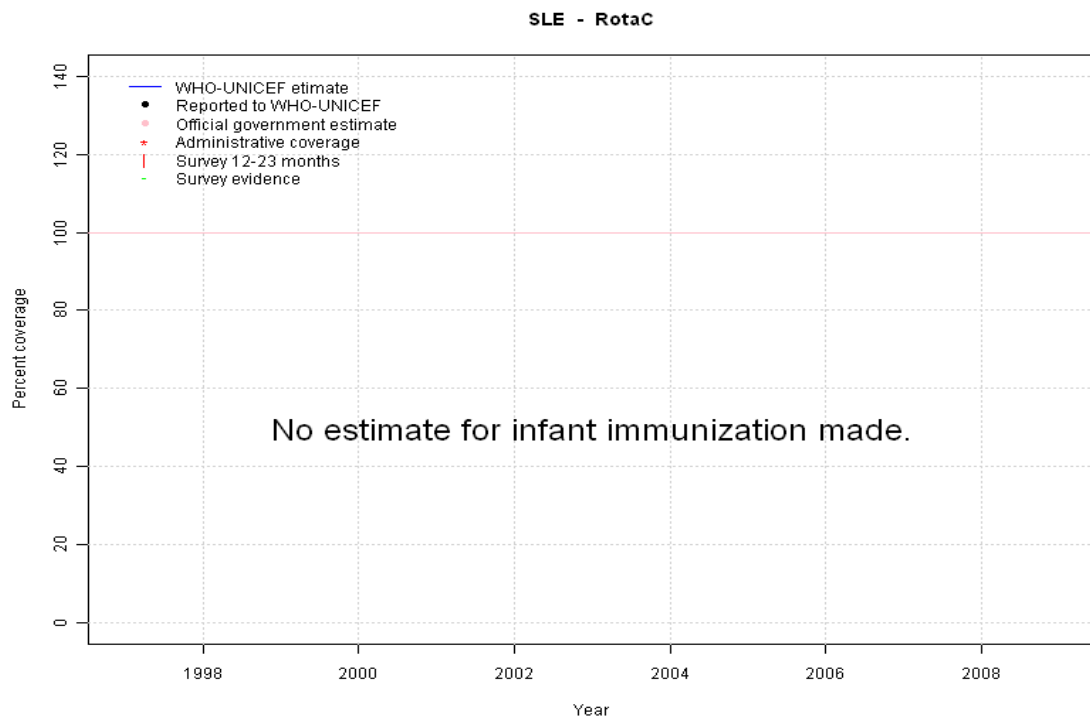
2007: Estimate follows DTP3 coverage levels. Hib introduced in 2007 Vaccine presentation is DTP-HepB-Hib.

2008: Reported data (87 percent) calibrated to 2007 and 2009 levels.

2009: Estimate based on reported data adjusted to dtp3 level of 2007 survey. Survey results of 92 percent with sample size 0 ignored; sample size less than 300.

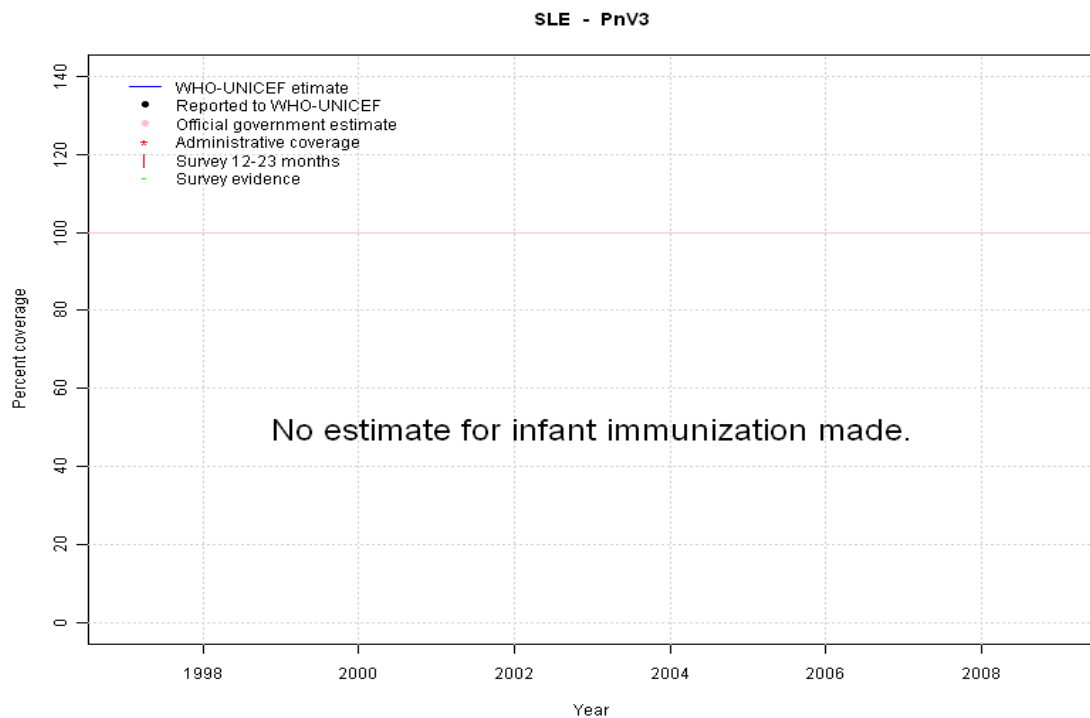
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63	71	75
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	79	87	91
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	87	91
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	87	91
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Sierra Leone - RotaC



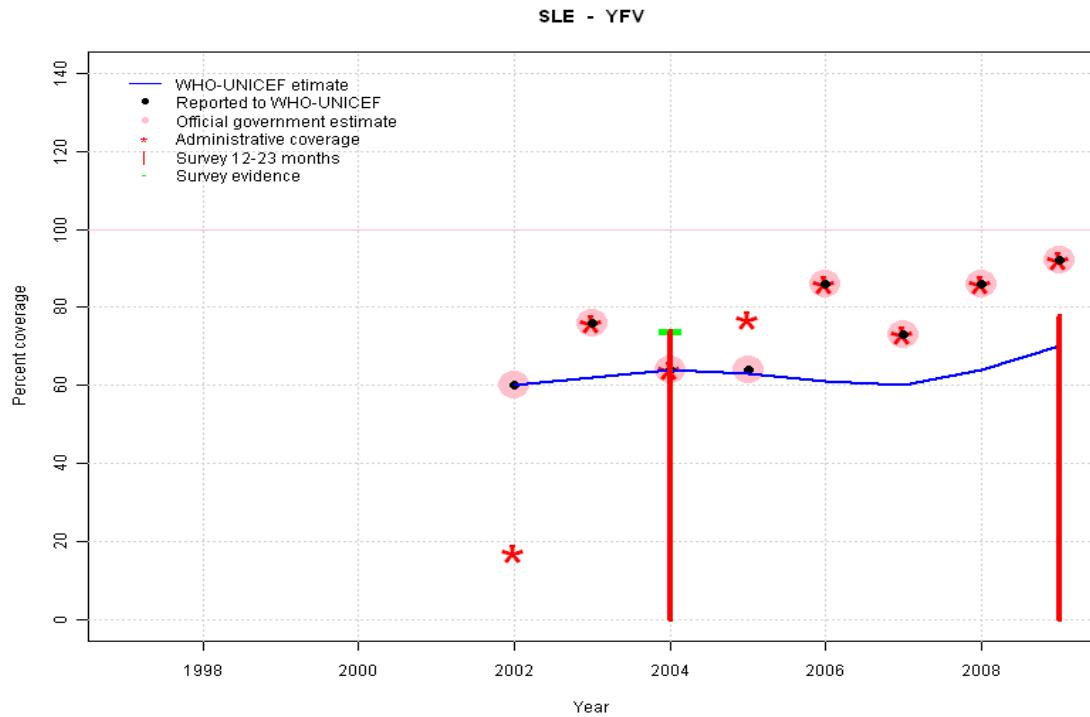
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA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

Sierra Leone - 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

Sierra Leone - YFV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	60	62	64	63	61	60	64	70
Reported	NA	NA	NA	NA	NA	60	76	64	64	86	73	86	92
Official	NA	NA	NA	NA	NA	60	76	64	64	86	73	86	92
Administrative	NA	NA	NA	NA	NA	17	76	64	77	86	73	86	92
Survey	NA	NA	NA	NA	NA	NA	NA	74	NA	NA	NA	NA	NA

Description:

- 2002: Estimate based on trend in reported data. YFV introduced in 2002
- 2003: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 60 percent in 2002 and 64 percent in 2004. 2003 reported data (76 percent) inconsistent with data from other years.
- 2004: Estimate based on reported data (64 percent) confirmed by survey (74 percent).
- 2005: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting.
- 2006: Estimate based on working group decision to interpolated between 2004 and 2007. Fluctuating and inconsistent data suggest poor reporting. 2006 reported data (86 percent) inconsistent with data from other years.
- 2007: Estimate follows MCV coverage levels. 2007 reported data (73 percent) inconsistent with data from other years.
- 2008: Estimate based on reported data adjusted to MCV level of 2007 survey.
- 2009: Estimate based on reported data adjusted to MCV level of 2007 survey. Survey results of 78 percent with sample size 0 ignored; sample size less than 300.

Sierra Leone - survey details

2009 Sierra Leone National Immunisation Survey, Preliminary Results

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	97	12-23 m	0	0
BCG	Card or History	99	12-23 m	0	0
DTP1	Card or History	96	12-23 m	0	0
DTP1	Card	74	12-23 m	0	0
DTP3	Card or History	92	12-23 m	0	0
DTP3	Card	70	12-23 m	0	0
HepB1	Card	74	12-23 m	0	0
HepB1	Card or History	96	12-23 m	0	0
HepB3	Card	70	12-23 m	0	0
HepB3	Card or History	92	12-23 m	0	0
Hib1	Card	74	12-23 m	0	0
Hib1	Card or History	96	12-23 m	0	0
Hib3	Card	70	12-23 m	0	0
Hib3	Card or History	92	12-23 m	0	0
MCV	Card or History	78	12-23 m	0	0
MCV	Card	57	12-23 m	0	0
Pol1	Card	73	12-23 m	0	0
Pol1	Card or History	96	12-23 m	0	0
Pol3	Card or History	85	12-23 m	0	0
Pol3	Card	64	12-23 m	0	0
YFV	Card	57	12-23 m	0	0
YFV	Card or History	78	12-23 m	0	0

2007 Sierra Leone Demographic and Health Survey 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	80	12-23 m	1060	60
BCG	Card	59	12-23 m	1060	60
BCG	Card or History	82	12-23 m	1060	60
BCG	History	23	12-23 m	1060	60
DTP1	Card	55	12-23 m	1060	60
DTP1	History	21	12-23 m	1060	60
DTP1	Card or History	77	12-23 m	1060	60
DTP1	C or H <12 months	75	12-23 m	1060	60

DTP3	C or H <12 months	55	12-23 m	1060	60
DTP3	Card or History	60	12-23 m	1060	60
DTP3	History	15	12-23 m	1060	60
DTP3	Card	46	12-23 m	1060	60
MCV	Card or History	60	12-23 m	1060	60
MCV	Card	40	12-23 m	1060	60
MCV	C or H <12 months	46	12-23 m	1060	60
MCV	History	20	12-23 m	1060	60
Pol1	History	22	12-23 m	1060	60
Pol1	Card or History	76	12-23 m	1060	60
Pol1	C or H <12 months	74	12-23 m	1060	60
Pol1	Card	53	12-23 m	1060	60
Pol3	Card	44	12-23 m	1060	60
Pol3	C or H <12 months	45	12-23 m	1060	60
Pol3	History	6	12-23 m	1060	60
Pol3	Card or History	50	12-23 m	1060	60

2004 Sierra Leone Multiple Indicator Cluster Survey 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	50	12-23 m	1074	53
BCG	Card or History	86	12-23 m	1074	53
BCG	History	36	12-23 m	1074	53
BCG	C or H <12 months	84	12-23 m	1074	53
DTP1	C or H <12 months	78	12-23 m	1074	53
DTP1	History	35	12-23 m	1074	53
DTP1	Card	47	12-23 m	1074	53
DTP1	Card or History	82	12-23 m	1074	53
DTP3	C or H <12 months	56	12-23 m	1074	53
DTP3	History	25	12-23 m	1074	53
DTP3	Card	37	12-23 m	1074	53
DTP3	Card or History	63	12-23 m	1074	53
MCV	History	43	12-23 m	1074	53
MCV	Card or History	76	12-23 m	1074	53
MCV	Card	33	12-23 m	1074	53
MCV	C or H <12 months	62	12-23 m	1074	53
Pol1	History	38	12-23 m	1074	53
Pol1	Card or History	87	12-23 m	1074	53
Pol1	Card	48	12-23 m	1074	53

Sierra Leone - survey details

Pol1	C or H <12 months	84	12-23 m	1074	53
Pol3	C or H <12 months	57	12-23 m	1074	53
Pol3	Card	38	12-23 m	1074	53
Pol3	Card or History	64	12-23 m	1074	53
Pol3	History	26	12-23 m	1074	53
YFV	Card	31	12-23 m	1074	53
YFV	Card or History	74	12-23 m	1074	53
YFV	C or H <12 months	60	12-23 m	1074	53
YFV	History	44	12-23 m	1074	53

2000 Sierra Leone, EPI National Coverage Evaluation Survey 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	74	12-23 m	3385	74
DTP1	Card or History	64	12-23 m	3385	74

DTP3	Card or History	44	12-23 m	3385	74
MCV	Card or History	37	12-23 m	3385	74
Pol1	Card or History	66	12-23 m	3385	74
Pol3	Card or History	46	12-23 m	3385	74

1999 Sierra Leone, Multi-Indicator Cluster Survey-MICS2, Final Report, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	73	12-23 m	547	35
DTP1	Card or History	68	12-23 m	547	35
DTP3	Card or History	46	12-23 m	547	35
MCV	Card or History	62	12-23 m	547	35
Pol1	Card or History	82	12-23 m	547	35
Pol3	Card or History	61	12-23 m	547	35

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

Sierra Leone

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	57
1998	55
1999	53
2000	53
2001	66
2002	77
2003	79
2004	81
2005	83
2006	85
2007	94
2008	97
2009	97

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.