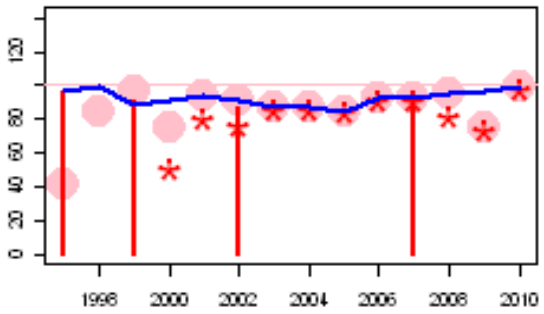
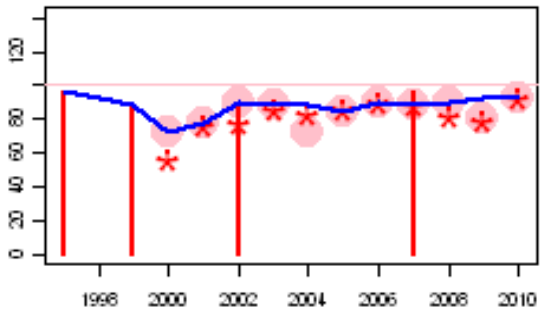
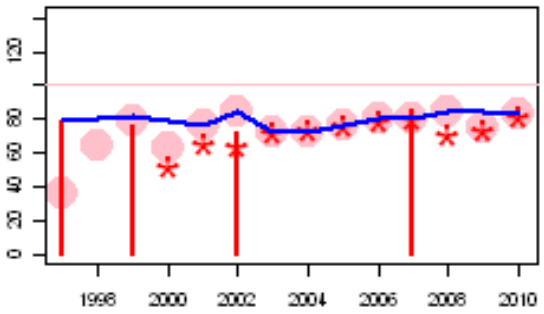
BCG



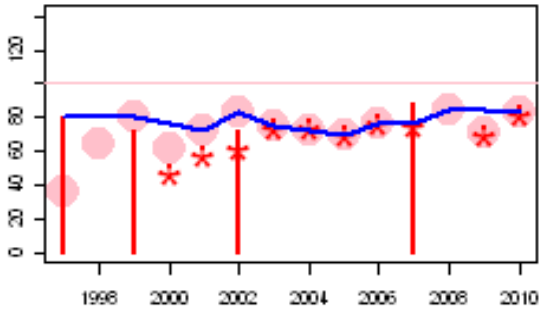
DTP1



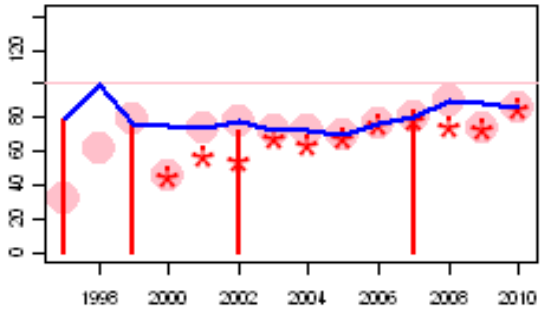
DTP3



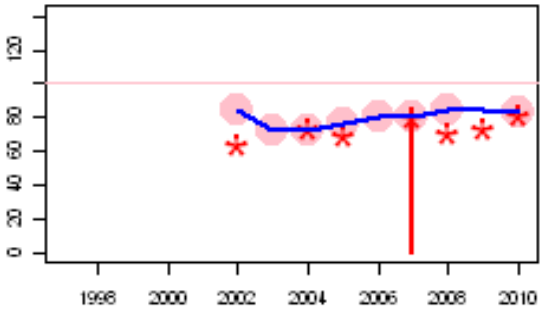
Pol3



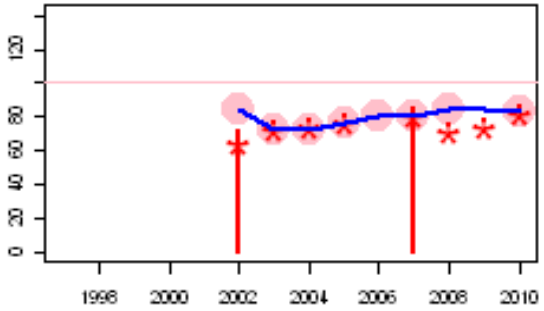
MCV



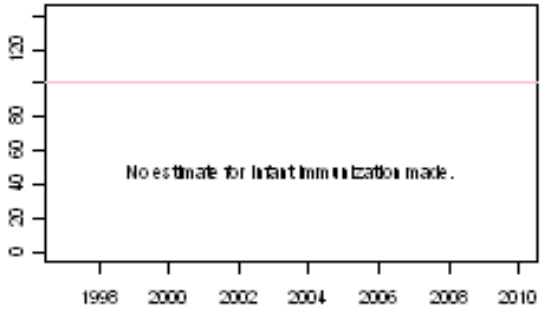
HepB3



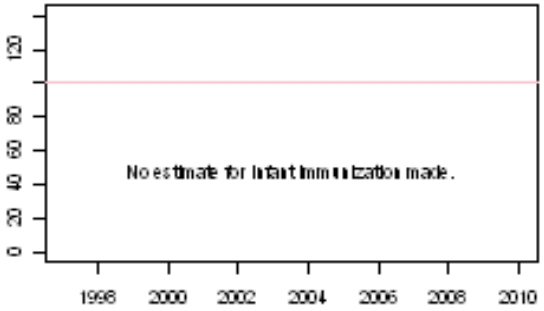
Hib3



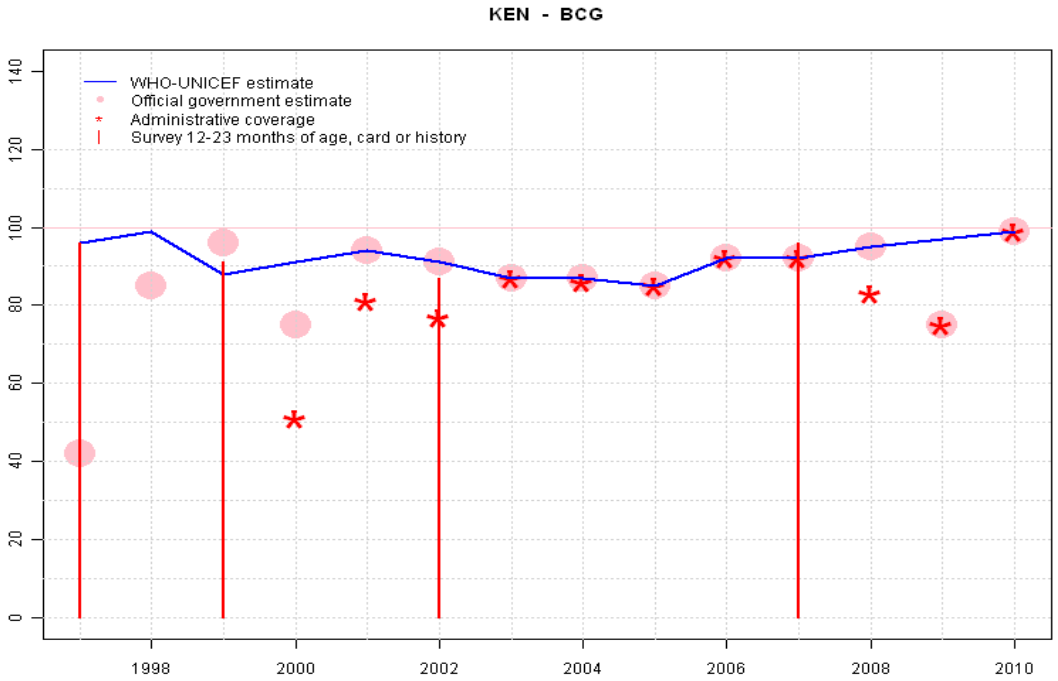
RotaC



PcV3



Kenya - BCG



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	96	99	88	91	94	91	87	87	85	92	92	95	97	99
Official	42	85	96	75	94	91	87	87	85	92	92	95	75	99
Administrative	NA	NA	NA	51	81	77	87	86	85	92	92	83	75	99
Survey	96	NA	91	NA	NA	87	NA	NA	NA	NA	96	NA	NA	NA

Description:

1997: Legacy estimate.

1998: Reported data calibrated to 1997 and 1999 levels. Current estimate of 99 percent changed from previous revision value of 92 percent.

1999: No accepted reported data.Reported data of 88 percent estimated by interpolation betweeen 1998 and 2001supports trend in reported data. 91 percent survey results Reported data not accepted due to an increase from 85 percent to 96 percent with a subsequent decrease to 75 percent. Current estimate of 88 percent changed from previous revision value of 87 percent.

2000: Estimate based on interpolation between 1999 and 2001. Reported data not accepted due to a decline from 96 percent to 75 percent with a subsequent increase to 94 percent. Current estimate of 91 percent changed from previous revision value of 89 percent.

2001: Estimate based on reported data. Current estimate of 94 percent changed from previous revision value of 91 percent.

2002: Estimate based on reported data. 87 percent survey results supports reported data of 91 percent.

2003: Estimate based on reported data.

2004: Estimate based on reported data.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

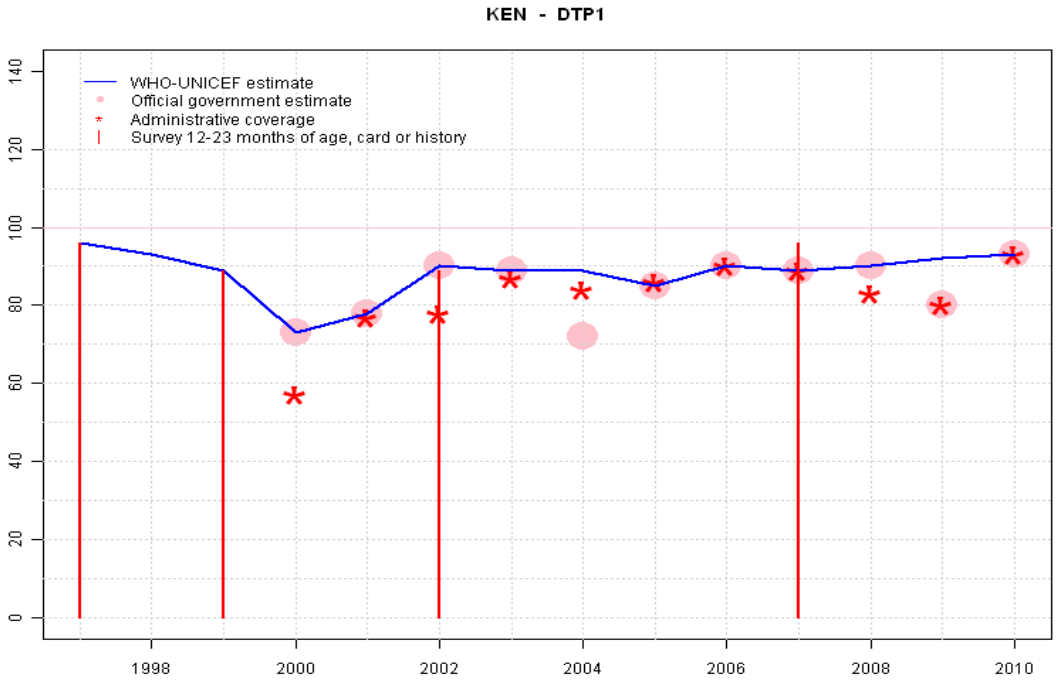
2007: Estimate based on reported data. 96 percent survey results supports reported data of 92 percent.

2008: Estimate based on reported data. Drop in coverage likely due to vaccine shortage (24 days)Current estimate of 95 percent changed from previous revision value of 83 percent.

2009: Estimate based on interpolation between 2008 and 2010. Reported data not accepted due to a decline from 95 percent to 75 percent with a subsequent increase to 99 percent. Estimate not based on reported data. Sudden unexplained change in target populationCurrent estimate of 97 percent changed from previous revision value of 75 percent.

2010: Estimate based on reported data. Revised denominator.

Kenya - DTP1

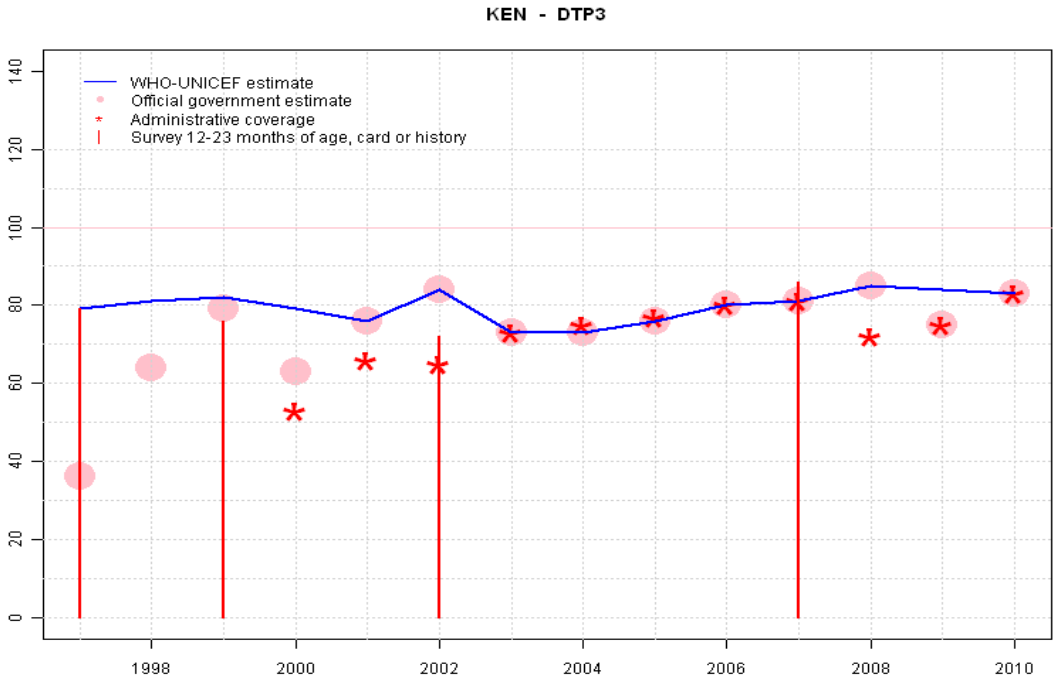


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	96	93	89	73	78	90	89	89	85	90	89	90	92	93
Official	NA	NA	NA	73	78	90	89	72	85	90	89	90	80	93
Administrative	NA	NA	NA	57	77	78	87	84	86	90	89	83	80	93
Survey	96	NA	89	NA	NA	89	NA	NA	NA	NA	96	NA	NA	NA

Description:

1997: Legacy estimate.
1998: Estimate based on interpolation between 1997 and 1999.
1999: No accepted reported data. Reported data of 73 percent estimated by extrapolating from 2000 does not support trend in reported data. 89 percent survey results
2000: Reported data calibrated to 1999 and 2002 levels. Current estimate of 73 percent changed from previous revision value of 83 percent.
2001: Reported data calibrated to 1999 and 2002 levels. Current estimate of 78 percent changed from previous revision value of 84 percent.
2002: Estimate based on reported data. 89 percent survey results supports reported data of 90 percent.
2003: Estimate based on reported data.
2004: No DTP1 data. Estimate based on DTP3 coverage of 73. Reported data not accepted due to a decline from 89 percent to 72 percent with a subsequent increase to 85 percent. Current estimate of 89 percent changed from previous revision value of 87 percent.
2005: Estimate based on reported data.
2006: Estimate based on reported data.
2007: Estimate based on reported data. 96 percent survey results supports reported data of 89 percent.
2008: Estimate based on reported data. Drop in coverage likely due to vaccine shortage (25 days)Current estimate of 90 percent changed from previous revision value of 83 percent.
2009: Estimate based on interpolation between 2008 and 2010. Estimate not based on reported data. Sudden unexplained change in target populationCurrent estimate of 92 percent changed from previous revision value of 80 percent.
2010: Estimate based on reported data. Revised denominator.

Kenya - DTP3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	79	81	82	79	76	84	73	73	76	80	81	85	84	83
Official	36	64	79	63	76	84	73	73	76	80	81	85	75	83
Administrative	NA	NA	NA	53	66	65	73	75	77	80	81	72	75	83
Survey	79	NA	76	NA	NA	72	NA	NA	NA	NA	86	NA	NA	NA

Description:

1997: Legacy estimate. Survey results of 79 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 55 percent and 3d dose card only coverage of 51 percent.

1998: Estimate based on interpolation between 1997 and 1999. Fluctuation and nationally reported data suggests poor recording and reporting.

1999: No accepted reported data. Reported data of 68 percent estimated by interpolation betweeen 1998 and 2001 does not support trend in reported data. 82 percent survey results Reported data not accepted due to an increase from 64 percent to 79 percent with a subsequent decrease to 63 percent. Survey results of 76 percent modified for recall bias to 82 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 63 percent and 3d dose card only coverage of 58 percent.

2000: Estimate based on interpolation between 1999 and 2001. Reported data not accepted due to a decline from 79 percent to 63 percent with a subsequent increase to 76 percent. Current estimate of 79 percent changed from previous revision value of 82 percent.

2001: Reported data calibrated to 1999 and 2002 levels. Current estimate of 76 percent changed from previous revision value of 80 percent.

2002: Estimate based on reported data. 80 percent survey results supports reported data of 84 percent. Survey results of 72 percent modified for recall bias to 80 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 59 percent and 3d dose card only coverage of 53 percent.

2003: Estimate based on reported data.

2004: Estimate based on reported data.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

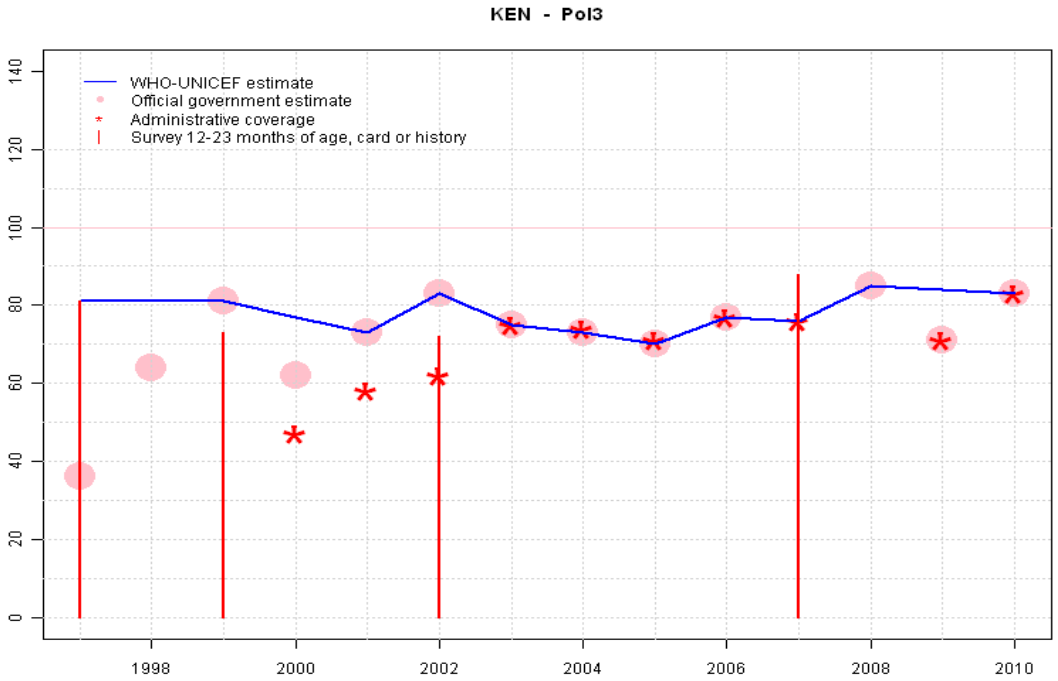
2007: Estimate based on reported data. 91 percent survey results supports reported data of 81 percent. Survey results of 86 percent modified for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 70 percent and 3d dose card only coverage of 66 percent.

2008: Estimate based on reported data. Drop in coverage likely due to vaccine shortage (25 days)Current estimate of 85 percent changed from previous revision value of 72 percent.

2009: Estimate based on interpolation between 2008 and 2010. Estimate not based on reported data. Sudden unexplained change in target populationCurrent estimate of 84 percent changed from previous revision value of 75 percent.

2010: Estimate based on reported data. Revised denominator.

Kenya - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	81	81	81	77	73	83	75	73	70	77	76	85	84	83
Official	36	64	81	62	73	83	75	73	70	77	NA	85	71	83
Administrative	NA	NA	NA	47	58	62	75	74	71	77	76	NA	71	83
Survey	81	NA	73	NA	NA	72	NA	NA	NA	NA	88	NA	NA	NA

Description:

1997: Legacy estimate. Survey results of 81 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 55 percent and 3d dose card only coverage of 51 percent.

1998: Estimate based on interpolation between 1997 and 1999. Fluctuation and nationally reported data suggests poor recording and reporting.

1999: No accepted reported data. Reported data of 67 percent estimated by interpolation betweeen 1998 and 2001 does not support trend in reported data. 81 percent survey results Reported data not accepted due to an increase from 64 percent to 81 percent with a subsequent decrease to 62 percent. Survey results of 73 percent modified for recall bias to 81 percent based on 1st dose card or history coverage of 87 percent, 1st dose card only coverage of 62 percent and 3d dose card only coverage of 58 percent.

2000: Estimate based on interpolation between 1999 and 2001. Reported data not accepted due to a decline from 81 percent to 62 percent with a subsequent increase to 73 percent. Current estimate of 77 percent changed from previous revision value of 80 percent.

2001: Reported data calibrated to 1999 and 2002 levels. Current estimate of 73 percent changed from previous revision value of 77 percent.

2002: Estimate based on reported data. 80 percent survey results supports reported data of 83 percent. Survey results of 72 percent modified for recall bias to 80 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 59 percent and 3d dose card only coverage of 52 percent.

2003: Estimate based on reported data.

2004: Estimate based on reported data.

2005: Estimate based on reported data.

2006: Estimate based on reported data.

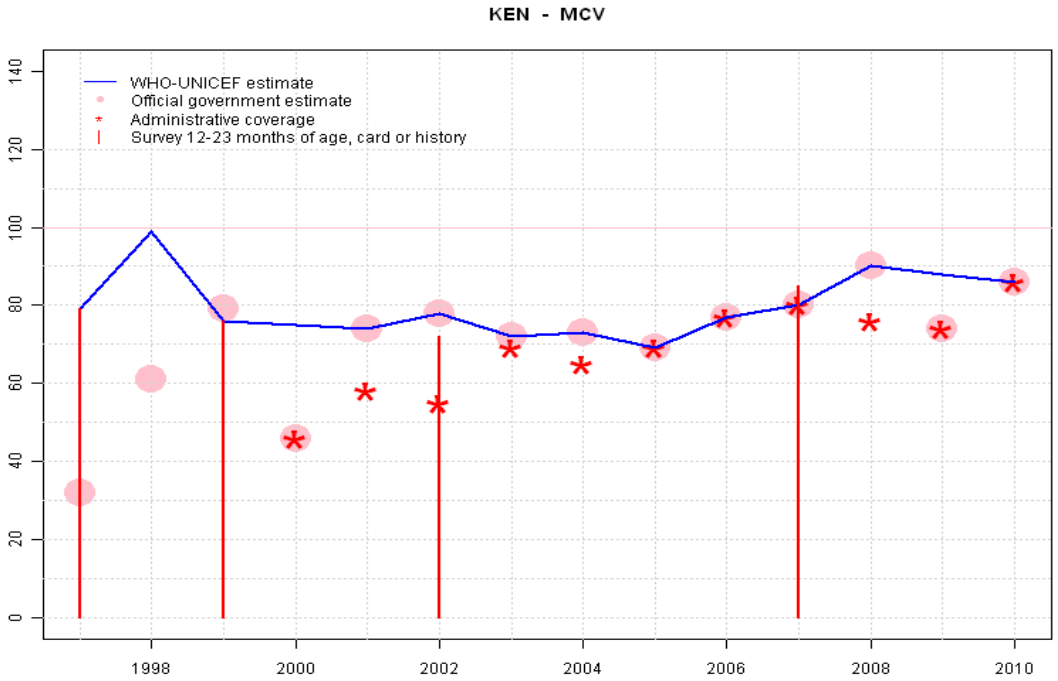
2007: Estimate based on reported data. Survey not accepted. Survey results likely include campaign doses.

2008: Estimate based on reported data. Current estimate of 85 percent changed from previous revision value of 74 percent.

2009: Estimate based on interpolation between 2008 and 2010. Reported data not accepted due to a decline from 85 percent to 71 percent with a subsequent increase to 83 percent. Estimate not based on reported data. Sudden unexplained change in target populationCurrent estimate of 84 percent changed from previous revision value of 71 percent.

2010: Estimate based on reported data. Revised denominator.

Kenya - MCV

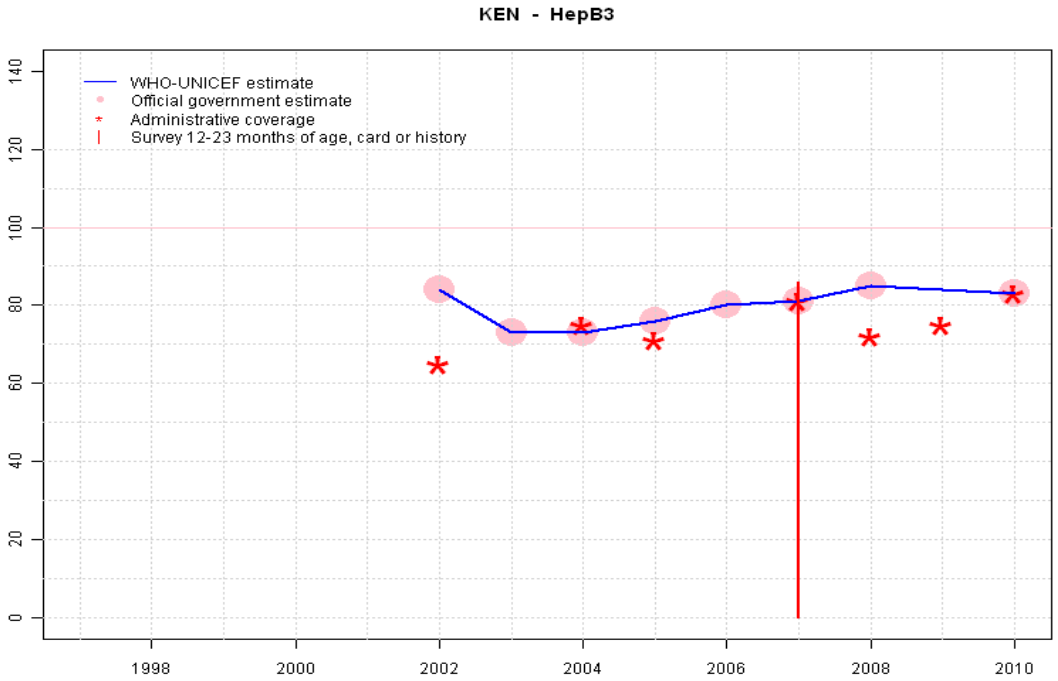


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	79	99	76	75	74	78	72	73	69	77	80	90	88	86
Official	32	61	79	46	74	78	72	73	69	77	80	90	74	86
Administrative	NA	NA	NA	46	58	55	69	65	69	77	80	76	74	86
Survey	79	NA	76	NA	NA	72	NA	NA	NA	NA	85	NA	NA	NA

Description:

1997: Legacy estimate.
1998: Reported data calibrated to 1997 and 1999 levels. Current estimate of 99 percent changed from previous revision value of 78 percent.
1999: Estimate follows survey result. Reported data not accepted due to an increase from 61 percent to 79 percent with a subsequent decrease to 46 percent.
2000: Estimate based on interpolation between 1999 and 2001. Reported data not accepted due to a decline from 79 percent to 46 percent with a subsequent increase to 74 percent. Current estimate of 75 percent changed from previous revision value of 78 percent.
2001: Reported data calibrated to 1999 and 2002 levels. Current estimate of 74 percent changed from previous revision value of 79 percent.
2002: Estimate based on reported data. 72 percent survey results supports reported data of 78 percent.
2003: Estimate based on reported data.
2004: Estimate based on reported data.
2005: Estimate based on reported data.
2006: Estimate based on reported data.
2007: Estimate based on reported data. 85 percent survey results supports reported data of 80 percent.
2008: Estimate based on reported data. Current estimate of 90 percent changed from previous revision value of 76 percent.
2009: Estimate based on interpolation between 2008 and 2010. Reported data not accepted due to a decline from 90 percent to 74 percent with a subsequent increase to 86 percent. Estimate not based on reported data. Sudden unexplained change in target populationCurrent estimate of 88 percent changed from previous revision value of 74 percent.
2010: Estimate based on reported data. Revised denominator.

Kenya - HepB3

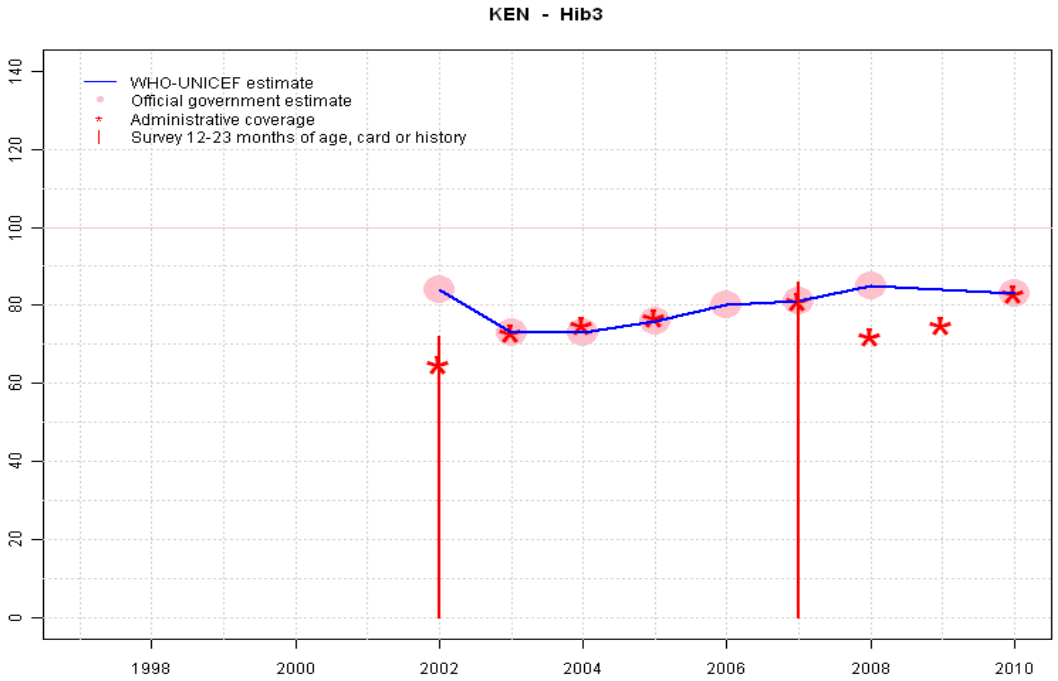


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	84	73	73	76	80	81	85	84	83
Official	NA	NA	NA	NA	NA	84	73	73	76	80	81	85	NA	83
Administrative	NA	NA	NA	NA	NA	65	NA	75	71	NA	81	72	75	83
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	86	NA	NA	NA

Description:

2002: Estimate based on reported data. HepB introduced in 2001. Reporting started in 2002. Vaccine presentation is DTP-HepB-Hib.
2003: Estimate based on reported data.
2004: Estimate based on reported data.
2005: Estimate based on reported data.
2006: Estimate based on reported data.
2007: Estimate based on reported data. 91 percent survey results supports reported data of 81 percent. Survey results of 86 percent modified for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 70 percent and 3d dose card only coverage of 66 percent.
2008: Estimate based on reported data. Drop in coverage likely due to vaccine shortage (25 days)Current estimate of 85 percent changed from previous revision value of 72 percent.
2009: Estimate based on interpolation between 2008 and 2010. Estimate not based on reported data. Sudden unexplained change in target populationCurrent estimate of 84 percent changed from previous revision value of 75 percent.
2010: Estimate based on reported data. Revised denominator.

Kenya - Hib3

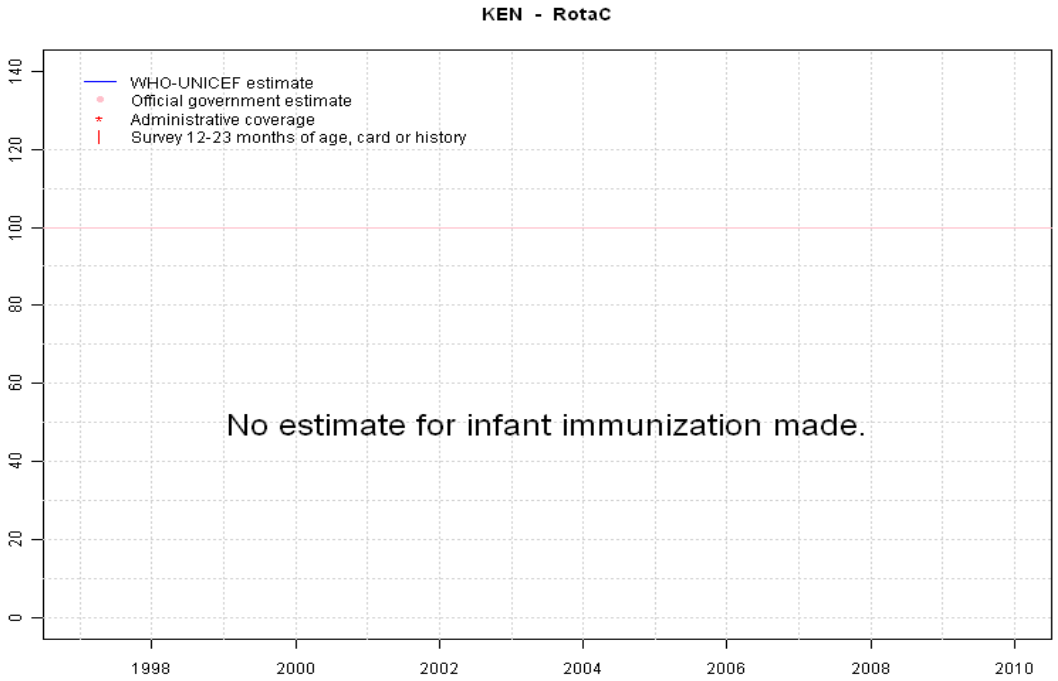


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	84	73	73	76	80	81	85	84	83
Official	NA	NA	NA	NA	NA	84	73	73	76	80	81	85	NA	83
Administrative	NA	NA	NA	NA	NA	65	73	75	77	NA	81	72	75	83
Survey	NA	NA	NA	NA	NA	72	NA	NA	NA	NA	86	NA	NA	NA

Description:

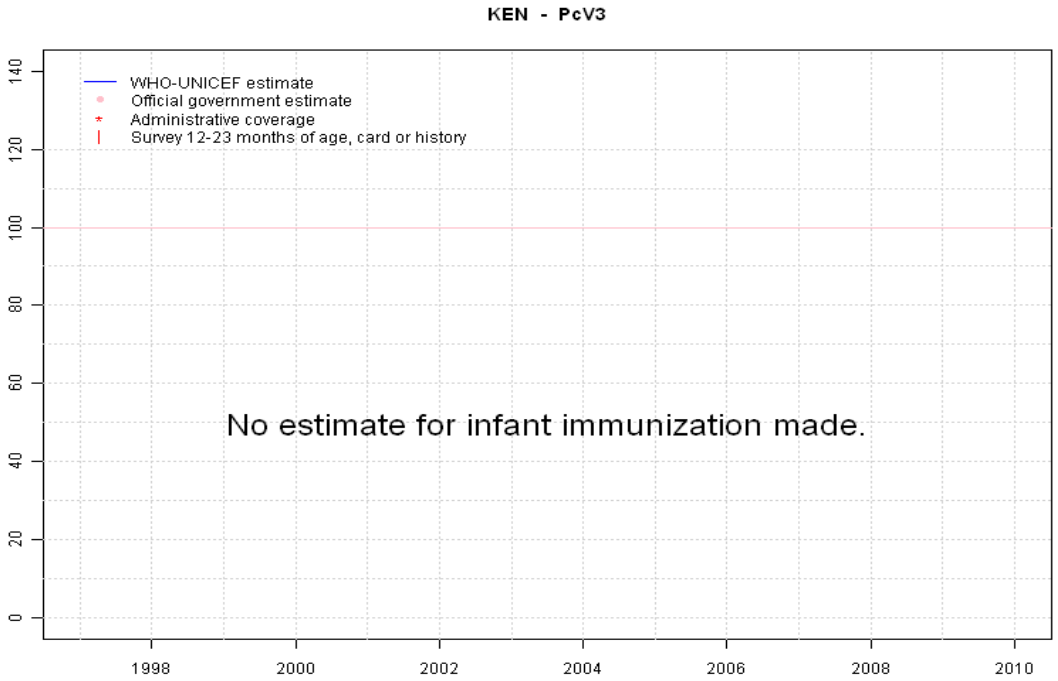
2002: Survey results not consistent with comparable survey data. Results not adjusted for recall bias. Hib introduced in 2001. Reporting started in 2002. Vaccine presentation is DTP-HepB-Hib.
2003: Estimate based on reported data.
2004: Estimate based on reported data.
2005: Estimate based on reported data.
2006: Estimate based on reported data.
2007: Estimate based on reported data. 91 percent survey results supports reported data of 81 percent. Survey results of 86 percent modified for recall bias to 91 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 70 percent and 3d dose card only coverage of 66 percent.
2008: Estimate based on reported data. Drop in coverage likely due to vaccine shortage (25 days)Current estimate of 85 percent changed from previous revision value of 72 percent.
2009: Estimate based on interpolation between 2008 and 2010. Estimate not based on reported data. Sudden unexplained change in target populationCurrent estimate of 84 percent changed from previous revision value of 75 percent.
2010: Estimate based on reported data. Revised denominator.

Kenya - RotaC



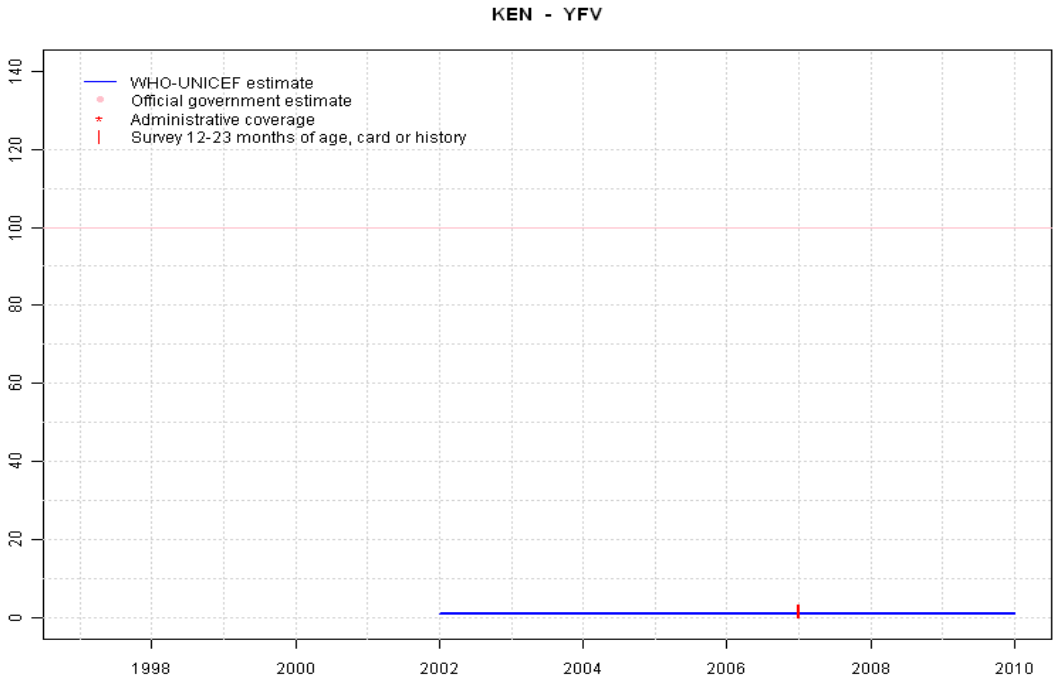
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Kenya - 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

Kenya - YFV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	1	1	1	1	1	1	1	1	1
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	3	NA	NA	NA

Description:

2002: Routine infant immunization recommended in 4 high risk areas which comprises approximately 3 percent of the national birth cohort.
2003: Routine infant immunization recommended in 4 high risk areas which comprises approximately 3 percent of the national birth cohort.
2004: Routine infant immunization recommended in 4 high risk areas which comprises approximately 3 percent of the national birth cohort.
2005: Routine infant immunization recommended in 4 high risk areas which comprises approximately 3 percent of the national birth cohort.
2006: Routine infant immunization recommended in 4 high risk areas which comprises approximately 3 percent of the national birth cohort.
2007: Routine infant immunization recommended in 4 high risk areas which comprises approximately 3 percent of the national birth cohort.
2008: Routine infant immunization recommended in 4 high risk areas which comprises approximately 3 percent of the national birth cohort.
2009: Routine infant immunization recommended in 4 high risk areas which comprises approximately 3 percent of the national birth cohort.
2010: Routine infant immunization recommended in 4 high risk areas which comprises approximately 3 percent of the national birth cohort. Revised denominator.

Kenya - survey details

2007 Kenya Demographic and Health Survey 2008-09

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	History	26	12-23 m	1096	70
BCG	Card or History	96	12-23 m	1096	70
BCG	Card	70	12-23 m	1096	70
BCG	C or H <12 months	95	12-23 m	1096	70
DTP1	History	26	12-23 m	1096	70
DTP1	Card	70	12-23 m	1096	70
DTP1	C or H <12 months	94	12-23 m	1096	70
DTP1	Card or History	96	12-23 m	1096	70
DTP3	C or H <12 months	84	12-23 m	1096	70
DTP3	Card or History	86	12-23 m	1096	70
DTP3	Card	66	12-23 m	1096	70
DTP3	History	20	12-23 m	1096	70
HepB1	C or H <12 months	94	12-23 m	1096	70
HepB1	Card or History	96	12-23 m	1096	70
HepB1	Card	70	12-23 m	1096	70
HepB1	History	26	12-23 m	1096	70
HepB3	C or H <12 months	84	12-23 m	1096	70
HepB3	Card	66	12-23 m	1096	70
HepB3	History	20	12-23 m	1096	70
HepB3	Card or History	86	12-23 m	1096	70
Hib1	C or H <12 months	94	12-23 m	1096	70
Hib1	History	26	12-23 m	1096	70
Hib1	Card or History	96	12-23 m	1096	70
Hib1	Card	70	12-23 m	1096	70
Hib3	History	20	12-23 m	1096	70
Hib3	Card or History	86	12-23 m	1096	70
Hib3	C or H <12 months	84	12-23 m	1096	70
Hib3	Card	66	12-23 m	1096	70
MCV	Card or History	85	12-23 m	1096	70
MCV	History	24	12-23 m	1096	70
MCV	Card	61	12-23 m	1096	70
MCV	C or H <12 months	74	12-23 m	1096	70
Pol1	C or H <12 months	94	12-23 m	1096	70
Pol1	Card or History	96	12-23 m	1096	70
Pol1	History	26	12-23 m	1096	70
Pol1	Card	70	12-23 m	1096	70
Pol3	C or H <12 months	84	12-23 m	1096	70
Pol3	Card or History	88	12-23 m	1096	70
Pol3	Card	67	12-23 m	1096	70
Pol3	History	21	12-23 m	1096	70
YFV	Card	3	12-23 m	1096	70
YFV	History	0	12-23 m	1096	70
YFV	Card or History	3	12-23 m	1096	70
YFV	C or H <12 months	2	12-23 m	1096	70

2002 National Demographic and Health Survey 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	History	30	12-23 m	1131	60
BCG	C or H <12 months	87	12-23 m	1131	60
BCG	Card	57	12-23 m	1131	60
BCG	Card or history	87	12-23 m	1131	60
DTP1	History	30	12-23 m	1131	60
DTP1	Card or history	89	12-23 m	1131	60
DTP1	C or H <12 months	88	12-23 m	1131	60
DTP1	Card	59	12-23 m	1131	60
DTP3	C or H <12 months	70	12-23 m	1131	60
DTP3	History	20	12-23 m	1131	60
DTP3	Card	53	12-23 m	1131	60
DTP3	Card or history	72	12-23 m	1131	60
Hib3	History	20	12-23 m	1131	60
Hib3	Card or history	72	12-23 m	1131	60
Hib3	Card	53	12-23 m	1131	60
Hib3	C or H <12 months	70	12-23 m	1131	60
MCV	Card or history	72	12-23 m	1131	60
MCV	Card	46	12-23 m	1131	60
MCV	History	26	12-23 m	1131	60
MCV	C or H <12 months	63	12-23 m	1131	60
Pol1	C or H <12 months	90	12-23 m	1131	60
Pol1	Card	59	12-23 m	1131	60
Pol1	Card or history	91	12-23 m	1131	60
Pol1	History	32	12-23 m	1131	60
Pol3	Card	52	12-23 m	1131	60
Pol3	Card or history	72	12-23 m	1131	60
Pol3	C or H <12 months	70	12-23 m	1131	60
Pol3	History	20	12-23 m	1131	60

Kenya - survey details

1999 Kenya Multiple Indicator Cluster Survey 2000, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	90	12-23 m	1544	0
BCG	Card	63	12-23 m	1544	0
BCG	Card or History	91	12-23 m	1544	0
BCG	History	28	12-23 m	1544	0
DTP1	Card or History	89	12-23 m	1544	0
DTP1	History	26	12-23 m	1544	0
DTP1	Card	63	12-23 m	1544	0
DTP1	C or H <12 months	89	12-23 m	1544	0
DTP3	C or H <12 months	75	12-23 m	1544	0
DTP3	Card	58	12-23 m	1544	0
DTP3	Card or History	76	12-23 m	1544	0
DTP3	History	18	12-23 m	1544	0
MCV	C or H <12 months	72	12-23 m	1544	0
MCV	Card	51	12-23 m	1544	0
MCV	Card or History	76	12-23 m	1544	0
MCV	History	25	12-23 m	1544	0
Pol1	C or H <12 months	86	12-23 m	1544	0
Pol1	Card or History	87	12-23 m	1544	0
Pol1	History	24	12-23 m	1544	0
Pol1	Card	62	12-23 m	1544	0
Pol3	C or H <12 months	72	12-23 m	1544	0
Pol3	Card	58	12-23 m	1544	0
Pol3	Card or History	73	12-23 m	1544	0
Pol3	History	15	12-23 m	1544	0

1997 Kenya Demographic and Health Survey 1998,1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	History	41	12-23 m	1097	55
BCG	Card	55	12-23 m	1097	55
BCG	Card <12 months	94	12-23 m	1097	55
BCG	Card or History	96	12-23 m	1097	55
DTP1	Card	55	12-23 m	1097	55
DTP1	Card <12 months	94	12-23 m	1097	55
DTP1	Card or History	96	12-23 m	1097	55
DTP1	History	41	12-23 m	1097	55
DTP3	Card	51	12-23 m	1097	55
DTP3	Card <12 months	76	12-23 m	1097	55
DTP3	Card or History	79	12-23 m	1097	55
DTP3	History	28	12-23 m	1097	55
MCV	Card or History	79	12-23 m	1097	55
MCV	Card <12 months	71	12-23 m	1097	55
MCV	History	33	12-23 m	1097	55
MCV	Card	46	12-23 m	1097	55
Pol1	Card	55	12-23 m	1097	55
Pol1	Card <12 months	94	12-23 m	1097	55
Pol1	Card or History	95	12-23 m	1097	55
Pol1	History	40	12-23 m	1097	55
Pol3	Card <12 months	78	12-23 m	1097	55
Pol3	Card or History	81	12-23 m	1097	55
Pol3	History	30	12-23 m	1097	55
Pol3	Card	51	12-23 m	1097	55

Further information and estmates 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

Kenya

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	61
1998	74
1999	68
2000	68
2001	69
2002	72
2003	73
2004	73
2005	73
2006	74
2007	74
2008	78
2009	78
2010	78

[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.