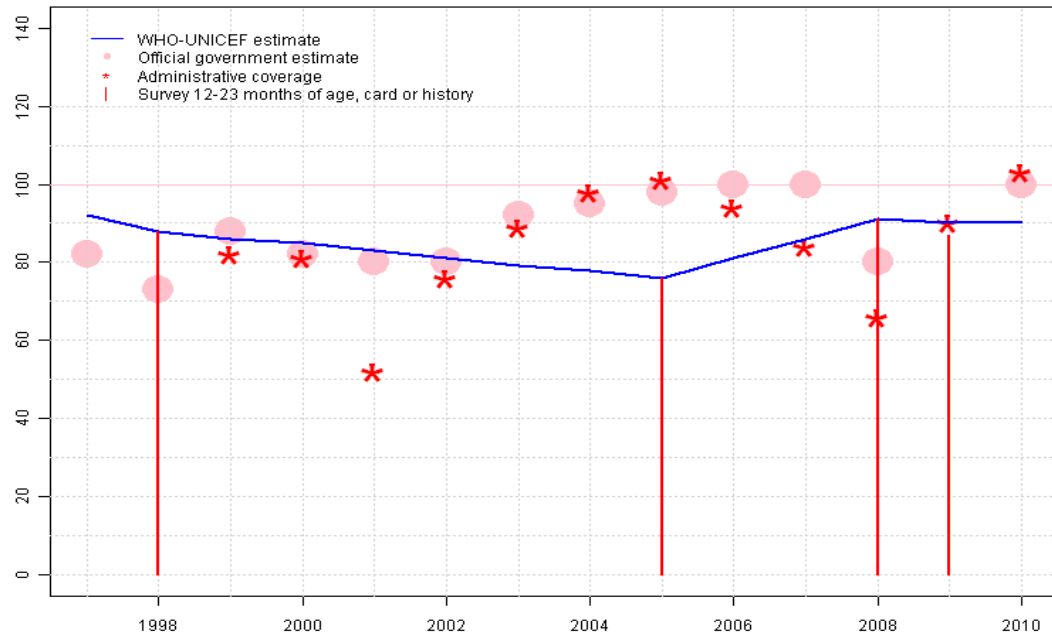


# Zimbabwe - BCG

ZWE - BCG



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	92	88	86	85	83	81	79	78	76	81	86	91	90	90
Official	82	73	88	82	80	80	92	95	98	100	100	80	NA	100
Administrative	NA	NA	82	81	52	76	89	98	101	94	84	66	90	103
Survey	NA	88	NA	NA	NA	NA	NA	NA	76	NA	NA	91	87	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on survey results. 88 percent survey results does not support reported data of 73 percent.

1999: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2000: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2001: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2002: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2003: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2004: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2005: Estimate based on survey results. 76 percent survey results does not support reported data of 98 percent.

2006: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

2007: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

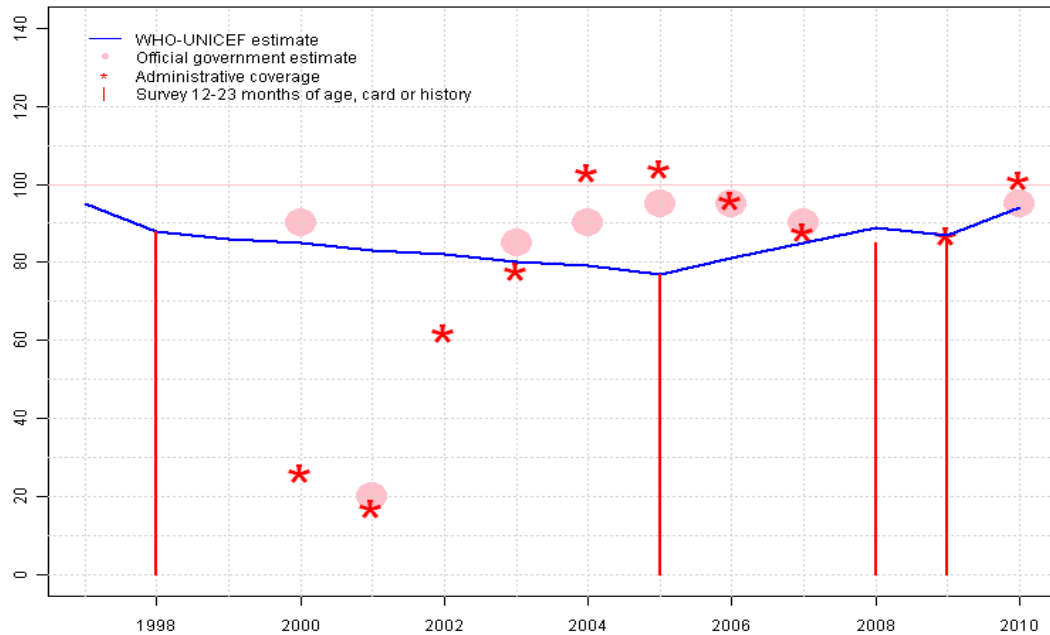
2008: Estimate based on survey results. 91 percent survey results does not support reported data of 80 percent.

2009: Estimate based on reported data. 87 percent survey results supports reported data of 90 percent. Current estimate of 90 percent changed from previous revision value of 91 percent.

2010: Estimate based on extrapolation from 2009 value of 90 percent. Reported data of 103 percent greater than 100 percent. Reported data not accepted due to a change from 90 level to 103 percent. Unexplained inconsistency in adjustments to administrative coverage levels.

# Zimbabwe - DTP1

ZWE - DTP1



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	95	88	86	85	83	82	80	79	77	81	85	89	87	94
Official	NA	NA	NA	90	20	NA	85	90	95	95	90	NA	NA	95
Administrative	NA	NA	NA	26	17	62	78	103	104	96	88	NA	87	101
Survey	NA	88	NA	NA	NA	NA	NA	NA	77	NA	NA	85	86	NA

## Description:

1997: Legacy estimate.

1998: Estimate is based on survey results.

1999: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2000: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2001: Estimate based on interpolation between 1998 and 2005. Reported data not accepted due to a decline from 90 percent to 20 percent with a subsequent increase to 62 percent. Unexplained temporal change in numerator and denominator levels.

2002: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2003: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2004: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2005: Estimate based on survey results. 77 percent survey results does not support reported data of 95 percent.

2006: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

2007: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

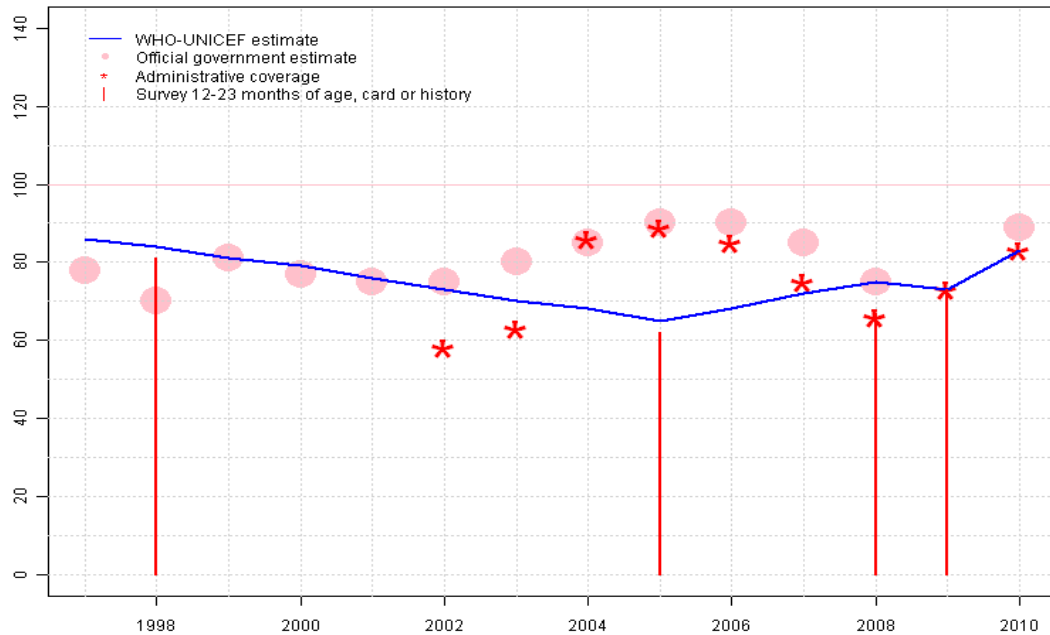
2008: No accepted reported data. Reported data of 89 percent estimated by interpolation between 2007 and 2009 supports trend in reported data. 85 percent survey results

2009: Estimate based on reported data. 86 percent survey results supports reported data of 87 percent.

2010: No DTP1 data. Estimate based on DTP3 coverage of 83. Reported data of 101 percent greater than 100 percent. Reported data not accepted due to a change from 87 level to 101 percent. Unexplained inconsistency in adjustments to administrative coverage levels.

# Zimbabwe - DTP3

ZWE - DTP3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	86	84	81	79	76	73	70	68	65	68	72	75	73	83
Official	78	70	81	77	75	75	80	85	90	90	85	75	NA	89
Administrative	NA	NA	NA	NA	NA	58	63	86	89	85	75	66	73	83
Survey	NA	81	NA	NA	NA	NA	NA	NA	62	NA	NA	67	73	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on survey results. 84 percent survey results does not support reported data of 70 percent. Survey results of 81 percent modified for recall bias to 84 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 68 percent and 3d dose card only coverage of 65 percent.

1999: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2000: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2001: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2002: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2003: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2004: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2005: Estimate based on survey results. 65 percent survey results does not support reported data of 90 percent. Survey results of 62 percent modified for recall bias to 65 percent based on 1st dose card or history coverage of 77 percent, 1st dose card only coverage of 70 percent and 3d dose card only coverage of 59 percent.

2006: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

2007: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

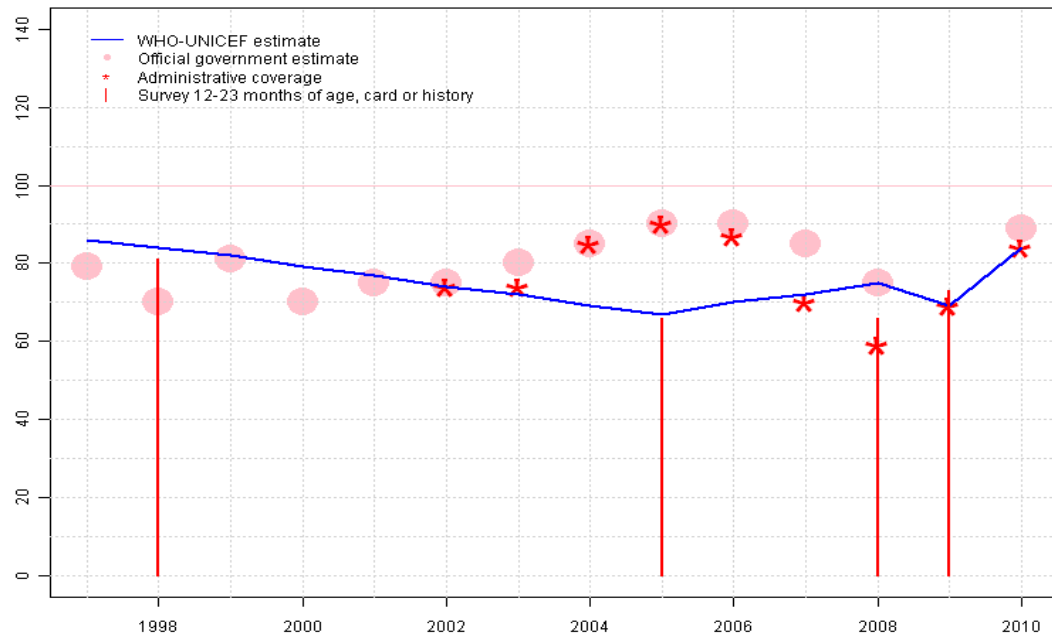
2008: Estimate based on reported data. 67 percent survey results supports reported data of 75 percent.

2009: Estimate based on reported data. 73 percent survey results supports reported data of 73 percent.

2010: Estimate based on reported data. Unexplained inconsistency in adjustments to administrative coverage levels.

# Zimbabwe - Pol3

ZWE - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	86	84	82	79	77	74	72	69	67	70	72	75	69	84
Official	79	70	81	70	75	75	80	85	90	90	85	75	NA	89
Administrative	NA	NA	NA	NA	NA	74	74	85	90	87	70	59	69	84
Survey	NA	81	NA	NA	NA	NA	NA	NA	66	NA	NA	66	73	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on survey results. 84 percent survey results does not support reported data of 70 percent. Survey results of 81 percent modified for recall bias to 84 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 68 percent and 3d dose card only coverage of 65 percent.

1999: Estimate based on interpolation between 1998 and 2005. Reported data not accepted due to an increase from 70 percent to 81 percent with a subsequent decrease to 70 percent. Unexplained temporal change in numerator and denominator levels.

2000: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2001: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2002: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2003: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2004: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2005: Estimate based on survey results. 67 percent survey results does not support reported data of 90 percent. Survey results of 66 percent modified for recall bias to 67 percent based on 1st dose card or history coverage of 77 percent, 1st dose card only coverage of 71 percent and 3d dose card only coverage of 62 percent.

2006: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

2007: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

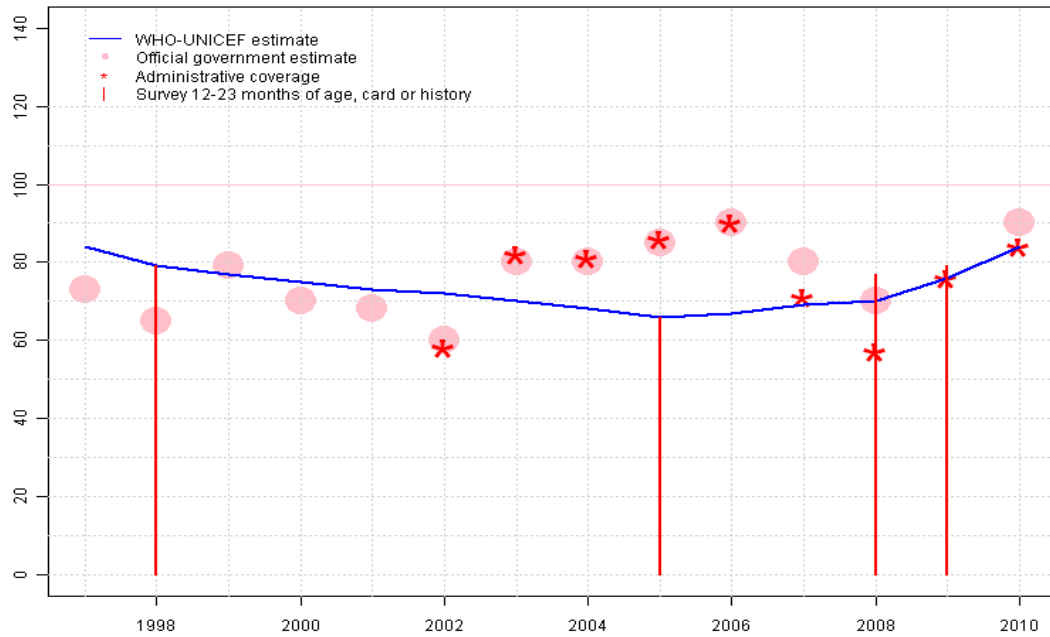
2008: Estimate based on reported data. 66 percent survey results supports reported data of 75 percent.

2009: Estimate based on reported data. 73 percent survey results supports reported data of 69 percent.

2010: Estimate based on reported data. Estimate based on reported data. Unexplained inconsistency in adjustments to administrative coverage levels.

# Zimbabwe - MCV

ZWE - MCV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	84	79	77	75	73	72	70	68	66	67	69	70	76	84
Official	73	65	79	70	68	60	80	80	85	90	80	70	NA	90
Administrative	NA	NA	NA	NA	NA	58	82	81	86	90	71	57	76	84
Survey	NA	79	NA	NA	NA	NA	NA	NA	66	NA	NA	77	79	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on survey results. 79 percent survey results does not support reported data of 65 percent.

1999: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2000: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2001: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2002: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2003: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2004: Estimate based on interpolation between 1998 and 2005. Unexplained temporal change in numerator and denominator levels.

2005: Estimate based on survey results. 66 percent survey results does not support reported data of 85 percent.

2006: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

2007: Estimate based on interpolation between 2005 and 2008. Inconsistency between reported and survey trends.

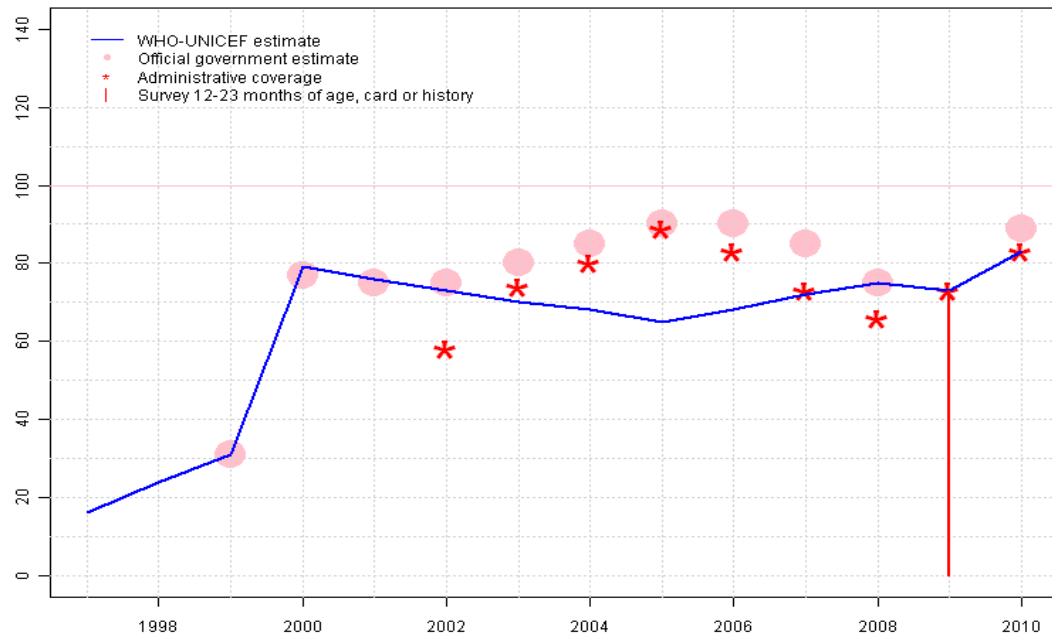
2008: Estimate based on reported data. 77 percent survey results supports reported data of 70 percent.

2009: Estimate based on reported data. 79 percent survey results supports reported data of 76 percent.

2010: Estimate based on reported data. Unexplained inconsistency in adjustments to administrative coverage levels.

# Zimbabwe - HepB3

ZWE - HepB3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	16	24	31	79	76	73	70	68	65	68	72	75	73	83
Official	NA	NA	31	77	75	75	80	85	90	90	85	75	NA	89
Administrative	NA	NA	NA	NA	NA	58	74	80	89	83	73	66	73	83
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	73	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on interpolation between 1997 and 1999.

1999: Estimate based on reported data. Unexplained temporal change in numerator and denominator levels.

2000: Estimate based on DTP3 coverage estimates. Unexplained temporal change in numerator and denominator levels. Current estimate of 79 percent changed from previous revision value of 78 percent.

2001: Estimate based on DTP3 coverage estimates. Unexplained temporal change in numerator and denominator levels. Current estimate of 76 percent changed from previous revision value of 75 percent.

2002: Estimate based on DTP3 coverage estimates. Unexplained temporal change in numerator and denominator levels.

2003: Estimate based on DTP3 coverage estimates. Unexplained temporal change in numerator and denominator levels.

2004: Estimate based on DTP3 coverage estimates. Unexplained temporal change in numerator and denominator levels. Current estimate of 68 percent changed from previous revision value of 67 percent.

2005: Estimate based on DTP3 coverage estimates. Current estimate of 65 percent changed from previous revision value of 64 percent.

2006: Estimate based on DTP3 coverage estimates. Inconsistency between reported and survey trends.

2007: Estimate based on DTP3 coverage estimates. Inconsistency between reported and survey trends. Current estimate of 72 percent changed from previous revision value of 71 percent.

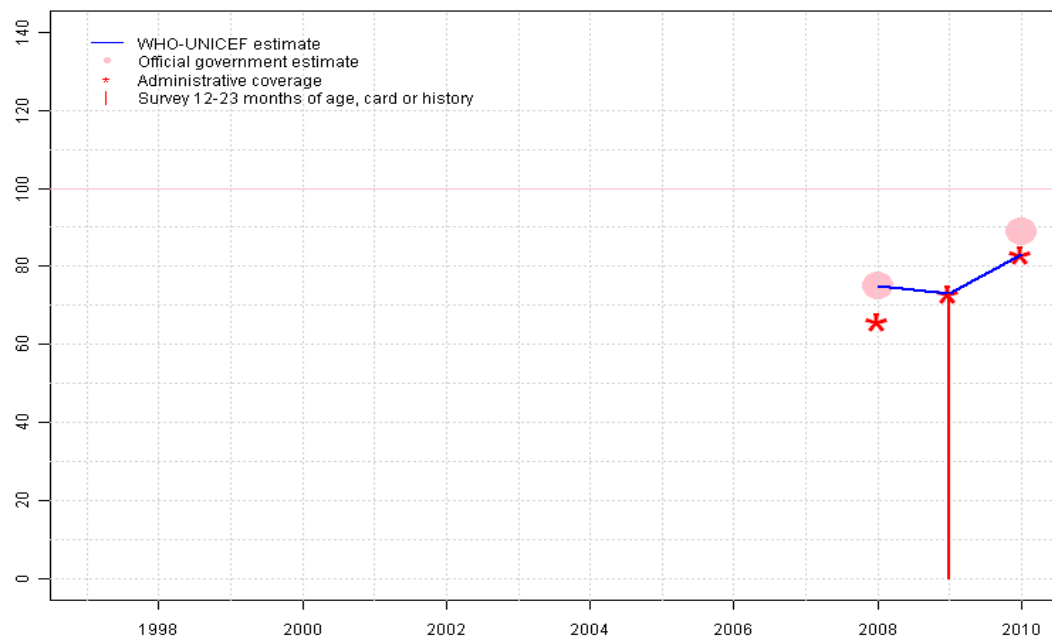
2008: Estimate based on reported data.

2009: Estimate based on reported data. 73 percent survey results supports reported data of 73 percent.

2010: Estimate based on reported data. Unexplained inconsistency in adjustments to administrative coverage levels.

# Zimbabwe - Hib3

ZWE - Hib3



## Description:

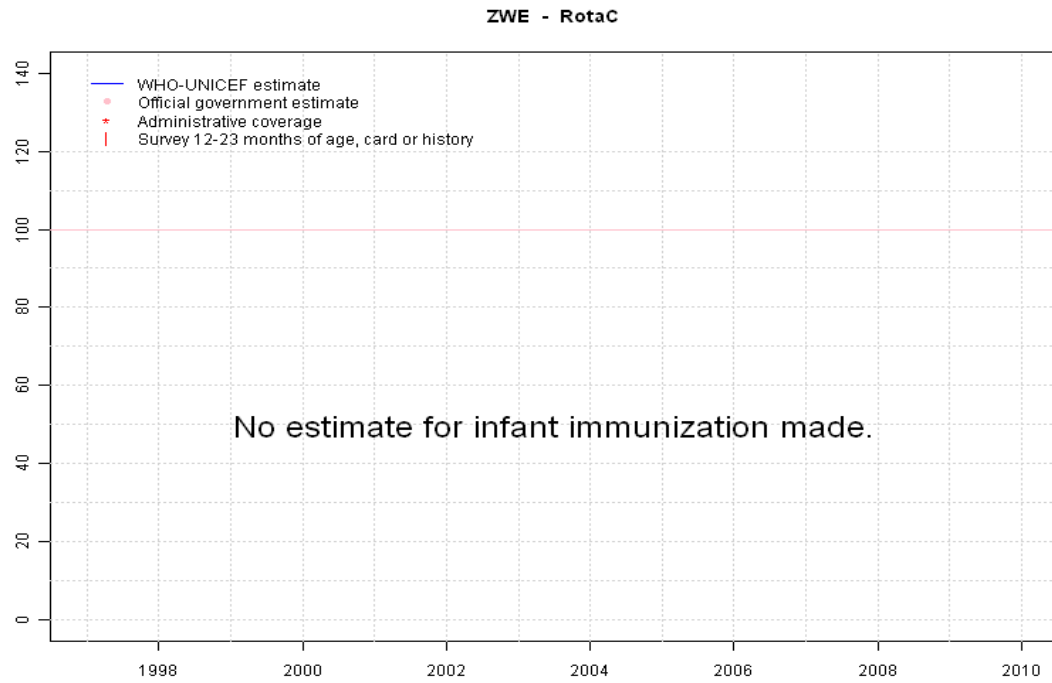
2008: Estimate based on reported data. Hib introduced in 2008 Vaccine presentation is DTP-HepB-Hib.

2009: Estimate based on reported data. 73 percent survey results supports reported data of 73 percent.

2010: Estimate based on reported data. Unexplained inconsistency in adjustments to administrative coverage levels.

	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	75	73	83
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	75	NA	89
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	66	73	83
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	73	NA

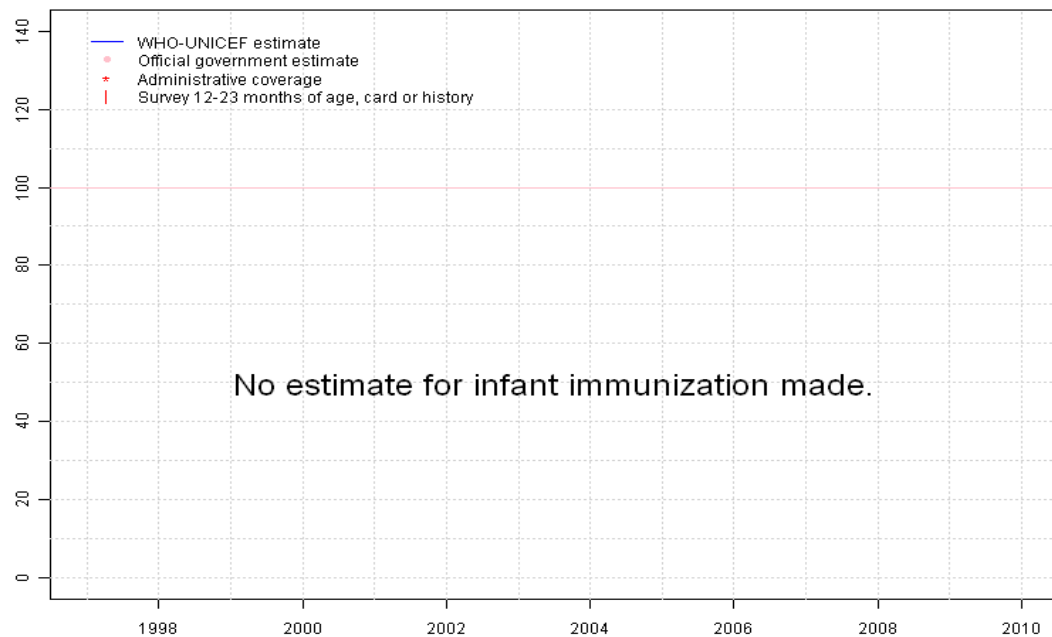
# Zimbabwe - RotaC



	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

# Zimbabwe - PcV3

ZWE - 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

# Zimbabwe - survey details

## 2009 Preliminary Zimbabwe Demographic and Health Survey 2010-11

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	87	12-23 m	1033	68
DTP1	Card or History	86	12-23 m	1033	68
DTP3	Card or History	73	12-23 m	1033	68
HepB1	Card or History	86	12-23 m	1033	68
HepB3	Card or History	73	12-23 m	1033	68
Hib1	Card or History	86	12-23 m	1033	68
Hib3	Card or History	73	12-23 m	1033	68
MCV	Card or History	79	12-23 m	1033	68
Pol1	Card or History	87	12-23 m	1033	68
Pol3	Card or History	73	12-23 m	1033	68

## 2008 Zimbabwe Multiple Indicator Monitoring Survey (MIMS) 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	91	12-23 m	1444	74
DTP1	Card or History	85	12-23 m	1444	74
DTP3	Card or History	67	12-23 m	1444	74
MCV	Card or History	77	12-23 m	1444	74
Pol1	Card or History	89	12-23 m	1444	74
Pol3	Card or History	66	12-23 m	1444	74

## 2005 Zimbabwe Demographic and Health 2005-2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	76	12-23 m	1019	72
BCG	Card	70	12-23 m	1019	72
BCG	History	6	12-23 m	1019	72
BCG	C or H <12 months	75	12-23 m	1019	72
DTP1	History	6	12-23 m	1019	72
DTP1	C or H <12 months	75	12-23 m	1019	72
DTP1	Card	70	12-23 m	1019	72

DTP1	Card or History	77	12-23 m	1019	72
DTP3	History	3	12-23 m	1019	72
DTP3	Card or History	62	12-23 m	1019	72
DTP3	Card	59	12-23 m	1019	72
DTP3	C or H <12 months	55	12-23 m	1019	72
MCV	Card or History	66	12-23 m	1019	72
MCV	Card	61	12-23 m	1019	72
MCV	C or H <12 months	56	12-23 m	1019	72
MCV	History	5	12-23 m	1019	72
Pol1	Card	71	12-23 m	1019	72
Pol1	History	6	12-23 m	1019	72
Pol1	Card or History	77	12-23 m	1019	72
Pol1	C or H <12 months	76	12-23 m	1019	72
Pol3	Card	62	12-23 m	1019	72
Pol3	Card or History	66	12-23 m	1019	72
Pol3	History	4	12-23 m	1019	72
Pol3	C or H <12 months	59	12-23 m	1019	72

## 1998 Zimbabwe Demographic and Health Survey 1999, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	87	12-23 m	699	69
BCG	History	20	12-23 m	699	69
BCG	Card or History	88	12-23 m	699	69
BCG	Card	68	12-23 m	699	69
BCG	C or H <12 months	89	24-35 m	669	61
BCG	C or H <12 months	86	36-47 m	629	54
BCG	C or H <12 months	88	48-59 m	611	55
DTP1	Card or History	88	12-23 m	699	69
DTP1	History	20	12-23 m	699	69
DTP1	Card	68	12-23 m	699	69
DTP1	C or H <12 months	88	12-23 m	699	69
DTP1	C or H <12 months	88	24-35 m	669	61
DTP1	C or H <12 months	85	36-47 m	629	54
DTP1	C or H <12 months	87	48-59 m	611	55
DTP3	History	16	12-23 m	699	69
DTP3	C or H <12 months	78	12-23 m	699	69
DTP3	Card	65	12-23 m	699	69
DTP3	Card or History	81	12-23 m	699	69

## Zimbabwe - survey details

DTP3	C or H <12 months	76	24-35 m	669	61	Pol1	Card or History	88	12-23 m	699	69
DTP3	C or H <12 months	72	36-47 m	629	54	Pol1	C or H <12 months	89	24-35 m	669	61
DTP3	C or H <12 months	73	48-59 m	611	55	Pol1	C or H <12 months	85	36-47 m	629	54
MCV	Card or History	79	12-23 m	699	69	Pol1	C or H <12 months	88	48-59 m	611	55
MCV	C or H <12 months	71	12-23 m	699	69	Pol3	History	16	12-23 m	699	69
MCV	Card	62	12-23 m	699	69	Pol3	C or H <12 months	78	12-23 m	699	69
MCV	History	17	12-23 m	699	69	Pol3	Card or History	81	12-23 m	699	69
MCV	C or H <12 months	74	24-35 m	669	61	Pol3	Card	65	12-23 m	699	69
MCV	C or H <12 months	73	36-47 m	629	54	Pol3	C or H <12 months	77	24-35 m	669	61
MCV	C or H <12 months	68	48-59 m	611	55	Pol3	C or H <12 months	72	36-47 m	629	54
Pol1	C or H <12 months	88	12-23 m	699	69	Pol3	C or H <12 months	73	48-59 m	611	55
Pol1	Card	68	12-23 m	699	69						
Pol1	History	20	12-23 m	699	69						

Further information and estimates for 1980-1996 are available at:

[http://www.childinfo.org/immunization\\_countryreports.html](http://www.childinfo.org/immunization_countryreports.html)

[http://www.who.int/immunization\\_monitoring/routine/immunization\\_coverage/en/index4.html](http://www.who.int/immunization_monitoring/routine/immunization_coverage/en/index4.html)

## Zimbabwe

### 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	78
1998	74
1999	75
2000	76
2001	77
2002	78
2003	78
2004	79
2005	77
2006	78
2007	78
2008	76
2009	76
2010	76

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<sup>1</sup> 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.