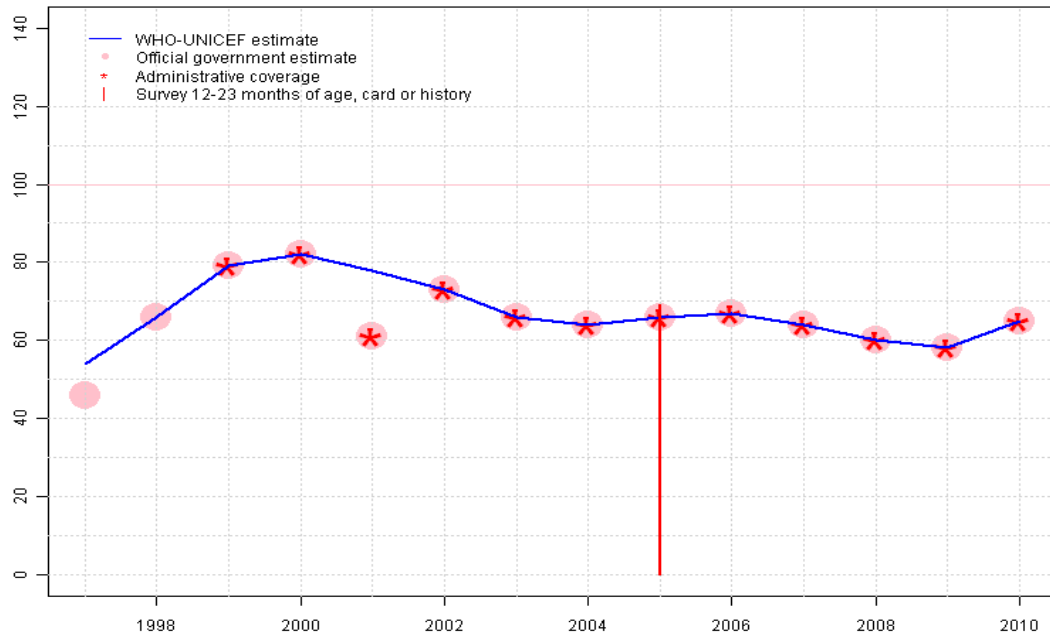


Yemen - BCG

YEM - BCG



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	54	66	79	82	78	73	66	64	66	67	64	60	58	65
Official	46	66	79	82	61	73	66	64	66	67	64	60	58	65
Administrative	NA	NA	79	82	61	73	66	64	66	67	64	60	58	65
Survey	NA	NA	NA	NA	NA	NA	NA	NA	69	NA	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: na Current estimate of 66 percent changed from previous revision value of 73 percent.

1999: Estimate based on reported data. Current estimate of 79 percent changed from previous revision value of 85 percent.

2000: Estimate based on reported data. Current estimate of 82 percent changed from previous revision value of 87 percent.

2001: Estimate based on interpolation between 2000 and 2002. Reported data not accepted due to a decline from 82 percent to 61 percent with a subsequent increase to 73 percent. Current estimate of 78 percent changed from previous revision value of 82 percent.

2002: Estimate based on reported data. Current estimate of 73 percent changed from previous revision value of 76 percent.

2003: Estimate based on reported data. Current estimate of 66 percent changed from previous revision value of 68 percent.

2004: Estimate based on reported data. Current estimate of 64 percent changed from previous revision value of 65 percent.

2005: Estimate based on reported data. Survey not accepted. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005. The survey results confirm reported coverage of 69 percent for this period. DTP-HepB-Hib pentavalent vaccine introduced during April 2005.

2006: Estimate based on reported data.

2007: Estimate based on reported data.

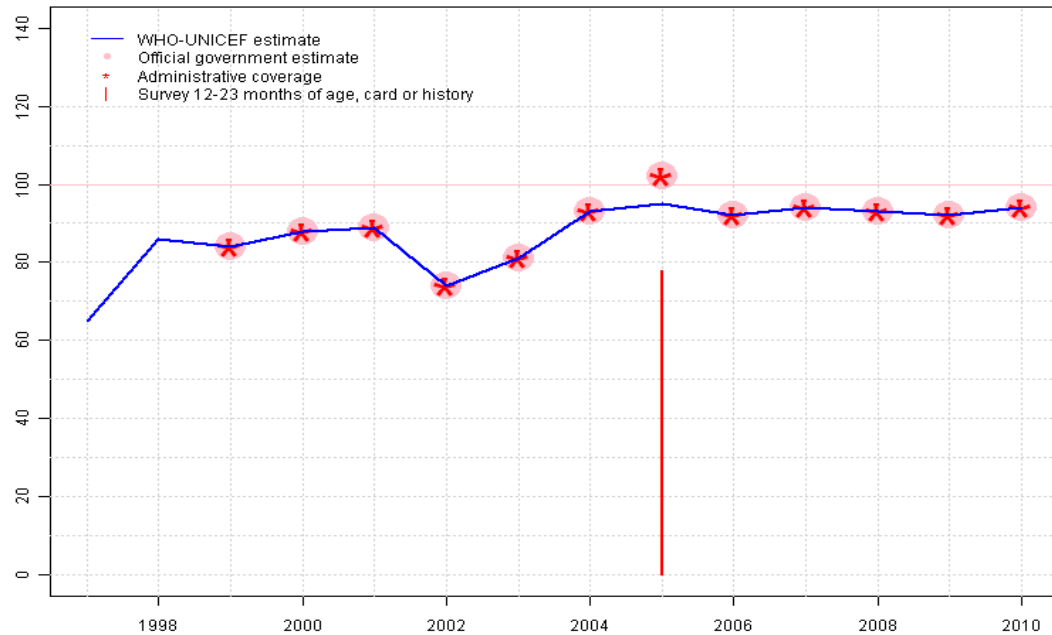
2008: Estimate based on reported data.

2009: Estimate based on reported data.

2010: Estimate based on reported data.

Yemen - DTP1

YEM - DTP1



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	65	86	84	88	89	74	81	93	95	92	94	93	92	94
Official	NA	NA	84	88	89	74	81	93	102	92	94	93	92	94
Administrative	NA	NA	84	88	89	74	81	93	102	92	94	93	92	94
Survey	NA	NA	NA	NA	NA	NA	NA	NA	78	NA	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: No DTP1 data. Estimate based on DTP3 coverage of 68. Current estimate of 86 percent changed from previous revision value of 66 percent.

1999: Reported data calibrated to 1997 and 2005 levels. Current estimate of 84 percent changed from previous revision value of 66 percent.

2000: Estimate based on reported data. Current estimate of 88 percent changed from previous revision value of 71 percent.

2001: Estimate based on reported data. Current estimate of 89 percent changed from previous revision value of 72 percent.

2002: Estimate based on reported data. Current estimate of 74 percent changed from previous revision value of 57 percent.

2003: Estimate based on reported data. Current estimate of 81 percent changed from previous revision value of 65 percent.

2004: Estimate based on reported data. Current estimate of 93 percent changed from previous revision value of 77 percent.

2005: No DTP1 data. Estimate based on DTP3 coverage of 85. Reported data of 102 percent greater than 100 percent. Survey not accepted. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005. The survey results confirm reported coverage of 69 percent for this period. DTP-HepB-Hib pentavalent vaccine introduced during April 2005. Current estimate of 95 percent changed from previous revision value of 78 percent.

2006: Estimate based on reported data. Current estimate of 92 percent changed from previous revision value of 77 percent.

2007: Estimate based on reported data. Current estimate of 94 percent changed from previous revision value of 79 percent.

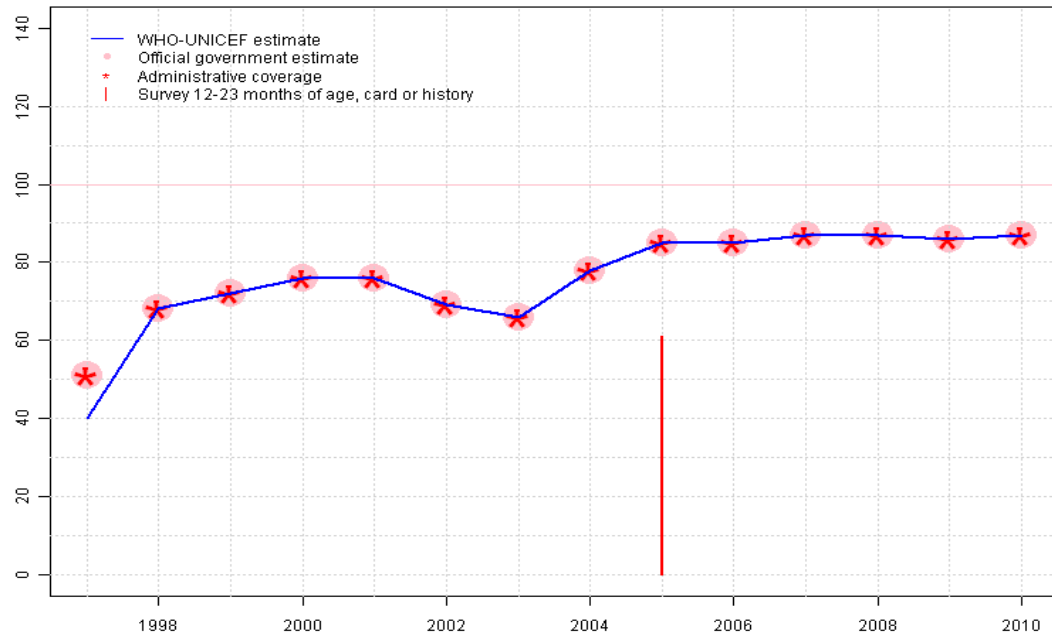
2008: Estimate based on reported data. Current estimate of 93 percent changed from previous revision value of 78 percent.

2009: Estimate based on reported data. Current estimate of 92 percent changed from previous revision value of 77 percent.

2010: Estimate based on reported data.

Yemen - DTP3

YEM - DTP3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	40	68	72	76	76	69	66	78	85	85	87	87	86	87
Official	51	68	72	76	76	69	66	78	85	85	87	87	86	87
Administrative	51	68	72	76	76	69	66	78	85	85	87	87	86	87
Survey	NA	NA	NA	NA	NA	NA	NA	NA	61	NA	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: na Current estimate of 68 percent changed from previous revision value of 56 percent.

1999: Estimate based on reported data. Current estimate of 72 percent changed from previous revision value of 58 percent.

2000: Estimate based on reported data. Current estimate of 76 percent changed from previous revision value of 61 percent.

2001: Estimate based on reported data. Current estimate of 76 percent changed from previous revision value of 61 percent.

2002: Estimate based on reported data. Current estimate of 69 percent changed from previous revision value of 53 percent.

2003: Estimate based on reported data. Current estimate of 66 percent changed from previous revision value of 48 percent.

2004: Estimate based on reported data. Current estimate of 78 percent changed from previous revision value of 59 percent.

2005: Estimate based on reported data. Survey not accepted. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005. The survey results confirm reported coverage of 69 percent for this period. DTP-HepB-Hib pentavalent vaccine introduced during April 2005. Current estimate of 85 percent changed from previous revision value of 65 percent.

2006: Estimate based on reported data. Disaggregated coverage data show 58 percent coverage through routine services and 27 percent coverage through outreach activities conducted over 5 rounds in 2006. Current estimate of 85 percent changed from previous revision value of 65 percent.

2007: Estimate based on reported data. Disaggregated coverage data show 58 percent coverage through routine services and 27 percent coverage through outreach activities conducted over 6 rounds in 2007. Current estimate of 87 percent changed from previous revision value of 67 percent.

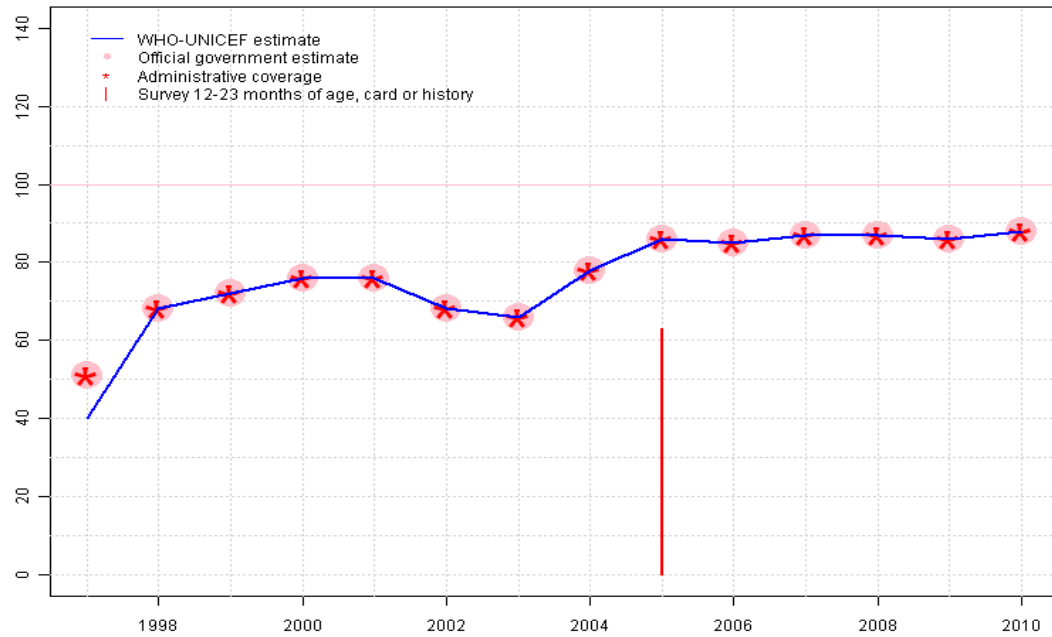
2008: Estimate based on reported data. Disaggregated coverage data show 57 percent coverage through routine services and 30 percent coverage through outreach activities conducted over 4 rounds in 2008. Current estimate of 87 percent changed from previous revision value of 67 percent.

2009: Estimate based on reported data. Disaggregated coverage data show 58 percent coverage through routine services and 28 percent coverage through outreach activities conducted over 4 rounds in 2009. Current estimate of 86 percent changed from previous revision value of 66 percent.

2010: Estimate based on reported data. Disaggregated coverage data show 58 percent coverage through routine services and 28 percent coverage through outreach activities conducted over 4 rounds in 2010.

Yemen - Pol3

YEM - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	40	68	72	76	76	68	66	78	86	85	87	87	86	88
Official	51	68	72	76	76	68	66	78	86	85	87	87	86	88
Administrative	51	68	72	76	76	68	66	78	86	85	87	87	86	88
Survey	NA	NA	NA	NA	NA	NA	NA	NA	63	NA	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: na Current estimate of 68 percent changed from previous revision value of 56 percent.

1999: Estimate based on reported data. Current estimate of 72 percent changed from previous revision value of 58 percent.

2000: Estimate based on reported data. Current estimate of 76 percent changed from previous revision value of 61 percent.

2001: Estimate based on reported data. Current estimate of 76 percent changed from previous revision value of 60 percent.

2002: Estimate based on reported data. Current estimate of 68 percent changed from previous revision value of 51 percent.

2003: Estimate based on reported data. Current estimate of 66 percent changed from previous revision value of 48 percent.

2004: Estimate based on reported data. Current estimate of 78 percent changed from previous revision value of 58 percent.

2005: Estimate based on reported data. Survey not accepted. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005. The survey results confirm reported coverage of 69 percent for this period. DTP-HepB-Hib pentavalent vaccine introduced during April 2005. Current estimate of 86 percent changed from previous revision value of 65 percent.

2006: Estimate based on reported data. Current estimate of 85 percent changed from previous revision value of 64 percent.

2007: Estimate based on reported data. Current estimate of 87 percent changed from previous revision value of 66 percent.

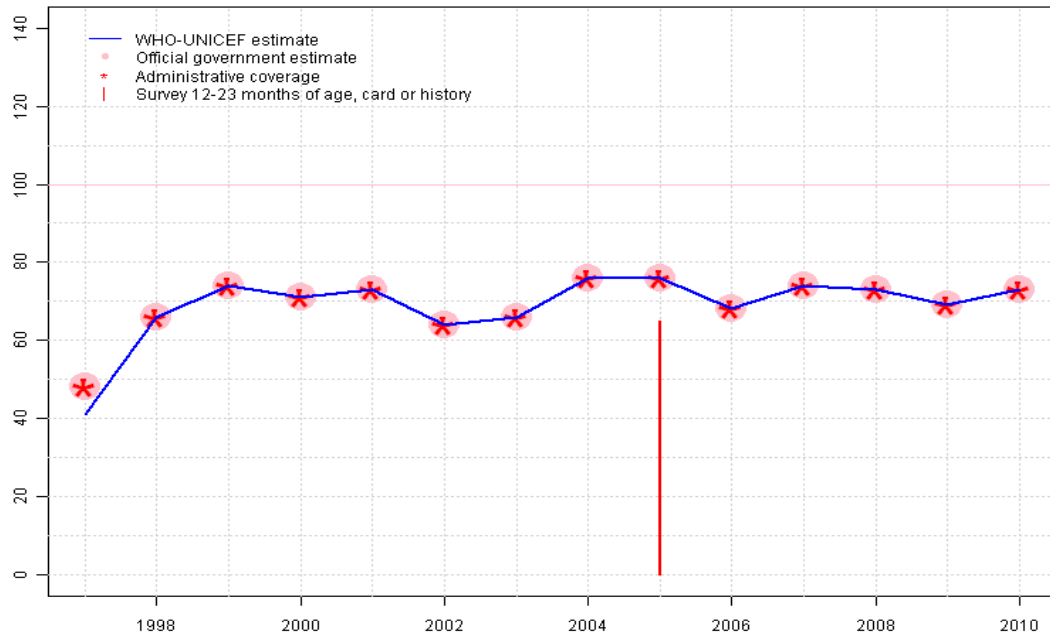
2008: Estimate based on reported data. Current estimate of 87 percent changed from previous revision value of 66 percent.

2009: Estimate based on reported data. Current estimate of 86 percent changed from previous revision value of 65 percent.

2010: Estimate based on reported data.

Yemen - MCV

YEM - MCV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	41	66	74	71	73	64	66	76	76	68	74	73	69	73
Official	48	66	74	71	73	64	66	76	76	68	74	73	69	73
Administrative	48	66	74	71	73	64	66	76	76	68	74	73	69	73
Survey	NA	NA	NA	NA	NA	NA	NA	NA	65	NA	NA	NA	NA	NA

Description:

1997: Legacy estimate.

1998: na Current estimate of 66 percent changed from previous revision value of 58 percent.

1999: Estimate based on reported data. Current estimate of 74 percent changed from previous revision value of 66 percent.

2000: Estimate based on reported data. Current estimate of 71 percent changed from previous revision value of 62 percent.

2001: Estimate based on reported data. Current estimate of 73 percent changed from previous revision value of 64 percent.

2002: Estimate based on reported data. Current estimate of 64 percent changed from previous revision value of 54 percent.

2003: Estimate based on reported data. Current estimate of 66 percent changed from previous revision value of 56 percent.

2004: Estimate based on reported data. Current estimate of 76 percent changed from previous revision value of 65 percent.

2005: Estimate based on reported data. Survey not accepted. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005. The survey results confirm reported coverage of 69 percent for this period. DTP-HepB-Hib pentavalent vaccine introduced during April 2005. Current estimate of 76 percent changed from previous revision value of 65 percent.

2006: Estimate based on reported data. Current estimate of 68 percent changed from previous revision value of 57 percent.

2007: Estimate based on reported data. Current estimate of 74 percent changed from previous revision value of 63 percent.

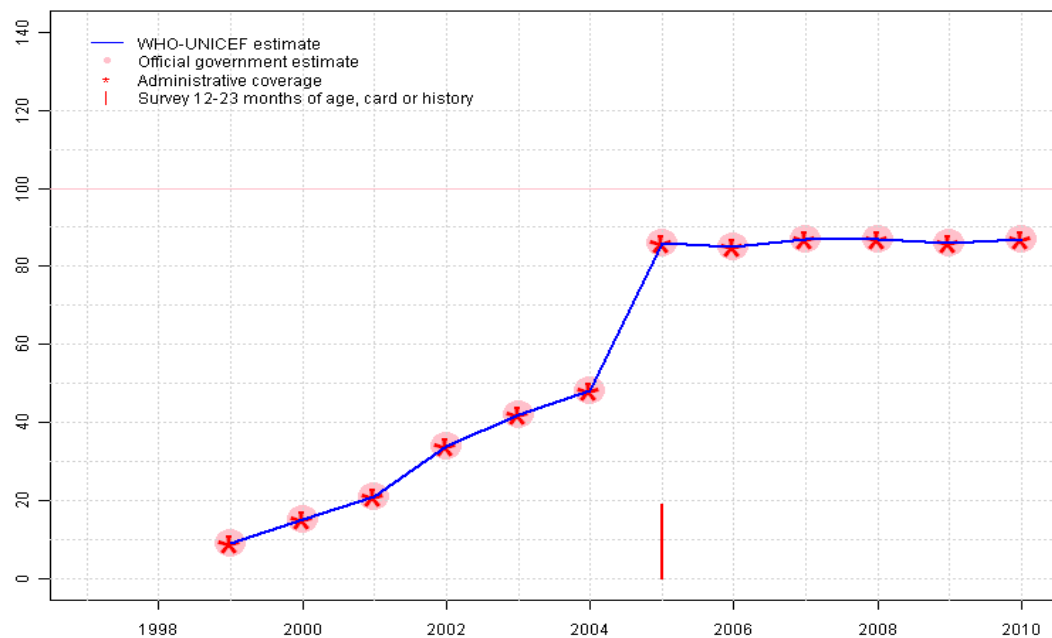
2008: Estimate based on reported data. Current estimate of 73 percent changed from previous revision value of 62 percent.

2009: Estimate based on reported data. Current estimate of 69 percent changed from previous revision value of 58 percent.

2010: Estimate based on reported data.

Yemen - HepB3

YEM - HepB3



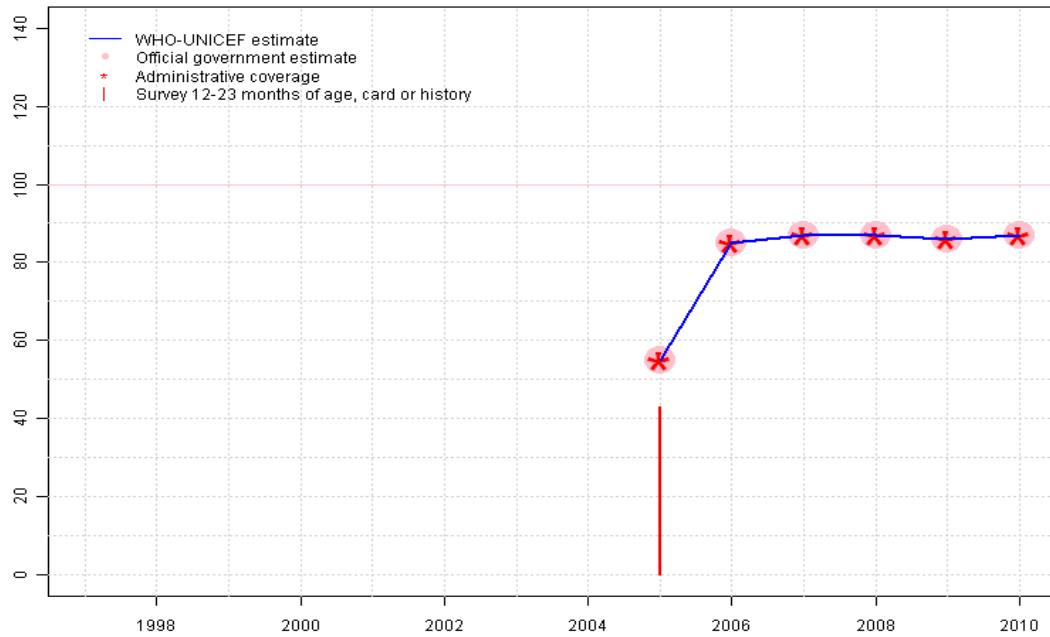
Description:

- 1999: Hepatitis B vaccine introduced in April 1999.
- 2000: Estimate based on reported data. Current estimate of 15 percent changed from previous revision value of 12 percent.
- 2001: Estimate based on reported data. Current estimate of 21 percent changed from previous revision value of 14 percent.
- 2002: Estimate based on reported data. Current estimate of 34 percent changed from previous revision value of 24 percent.
- 2003: Estimate based on reported data. Current estimate of 42 percent changed from previous revision value of 29 percent.
- 2004: Estimate based on reported data. Current estimate of 48 percent changed from previous revision value of 32 percent.
- 2005: Estimate based on reported data. Survey not accepted. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005. The survey results confirm reported coverage of 69 percent for this period. DTP-HepB-Hib pentavalent vaccine introduced during April 2005. Current estimate of 86 percent changed from previous revision value of 66 percent.
- 2006: Estimate based on reported data. Current estimate of 85 percent changed from previous revision value of 65 percent.
- 2007: Estimate based on reported data. Current estimate of 87 percent changed from previous revision value of 67 percent.
- 2008: Estimate based on reported data. Current estimate of 87 percent changed from previous revision value of 67 percent.
- 2009: Estimate based on reported data. Current estimate of 86 percent changed from previous revision value of 66 percent.
- 2010: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	9	15	21	34	42	48	86	85	87	87	86	87
Official	NA	NA	9	15	21	34	42	48	86	85	87	87	86	87
Administrative	NA	NA	9	15	21	34	42	48	86	85	87	87	86	87
Survey	NA	NA	NA	NA	NA	NA	NA	NA	19	NA	NA	NA	NA	NA

Yemen - Hib3

YEM - Hib3

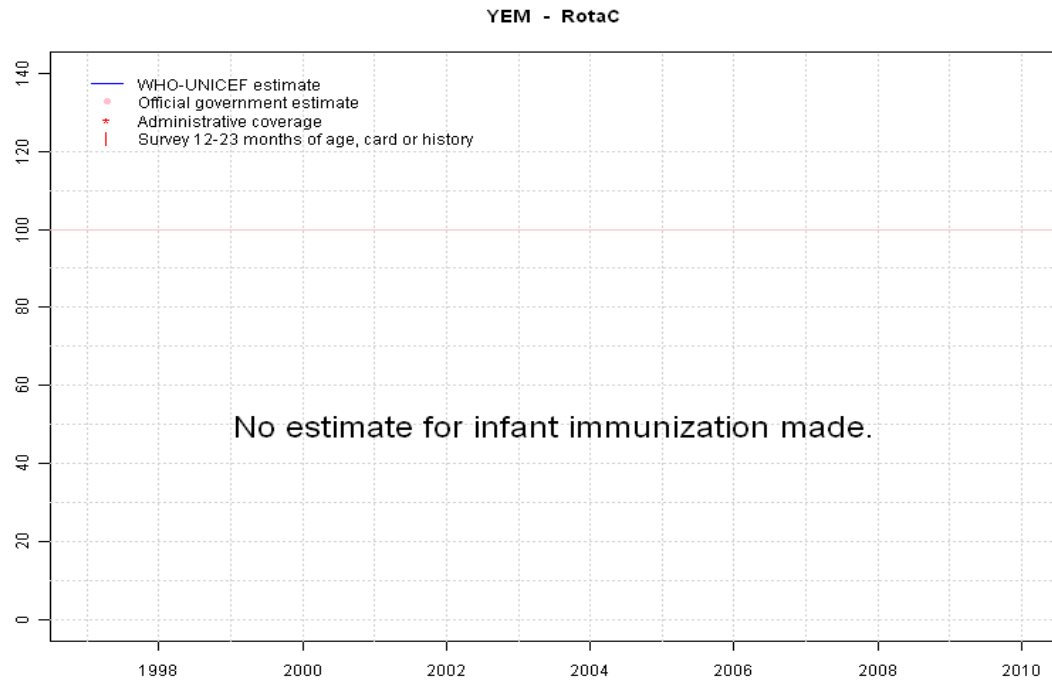


Description:

- 2005: Estimate based on reported data. Survey not accepted. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005. The survey results confirm reported coverage of 69 percent for this period. DTP-HepB-Hib pentavalent vaccine introduced during April 2005.
- 2006: Estimate based on reported data. Current estimate of 85 percent changed from previous revision value of 66 percent.
- 2007: Estimate based on reported data. Current estimate of 87 percent changed from previous revision value of 68 percent.
- 2008: Estimate based on reported data. Current estimate of 87 percent changed from previous revision value of 68 percent.
- 2009: Estimate based on reported data. Current estimate of 86 percent changed from previous revision value of 67 percent.
- 2010: Estimate based on reported data.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	55	85	87	87	86	87
Official	NA	NA	NA	NA	NA	NA	NA	NA	55	85	87	87	86	87
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	55	85	87	87	86	87
Survey	NA	NA	NA	NA	NA	NA	NA	NA	43	NA	NA	NA	NA	NA

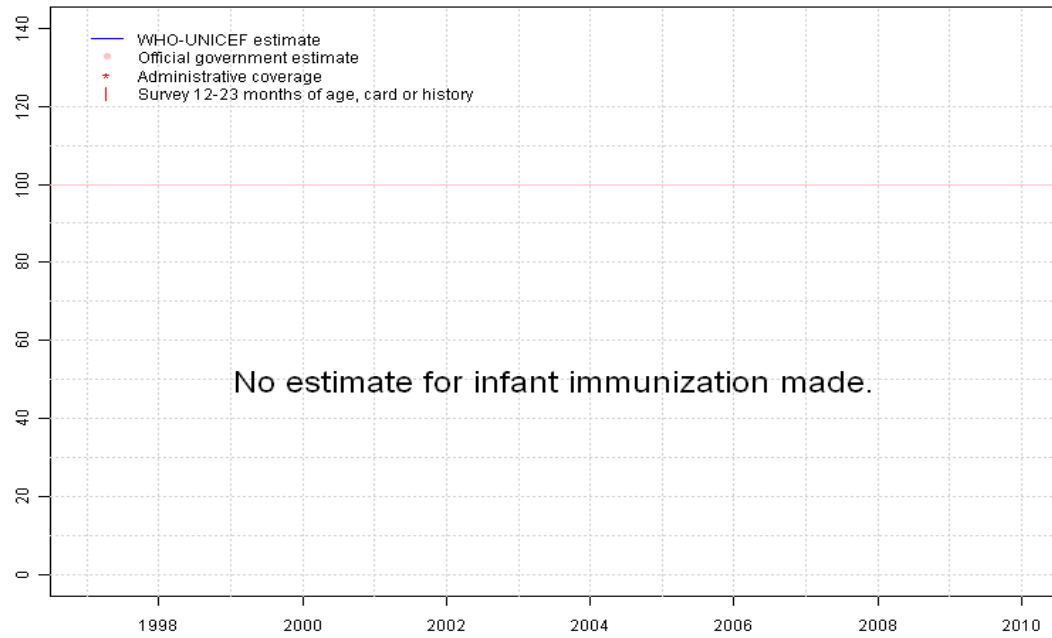
Yemen - RotaC



	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

Yemen - PcV3

YEM - 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

Yemen - survey details

2005 Yemen Multiple Indicator Cluster Survey 2006, Final Report

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	67	12-23 m	721	48
BCG	Card	38	12-23 m	721	48
BCG	Card or History	69	12-23 m	721	48
BCG	History	31	12-23 m	721	48
DTP1	History	32	12-23 m	721	48
DTP1	C or H <12 months	77	12-23 m	721	48
DTP1	Card	47	12-23 m	721	48
DTP1	Card or History	78	12-23 m	721	48
DTP3	History	22	12-23 m	721	48
DTP3	Card or History	61	12-23 m	721	48
DTP3	C or H <12 months	60	12-23 m	721	48
DTP3	Card	39	12-23 m	721	48
HepB1	History	16	12-23 m	721	48
HepB1	C or H <12 months	26	12-23 m	721	48
HepB1	Card	12	12-23 m	721	48
HepB1	Card or History	28	12-23 m	721	48
HepB3	History	11	12-23 m	721	48
HepB3	Card	9	12-23 m	721	48
HepB3	Card or History	19	12-23 m	721	48
HepB3	C or H <12 months	19	12-23 m	721	48
Hib1	Card	33	12-23 m	721	48
Hib1	Card or History	59	12-23 m	721	48
Hib1	History	26	12-23 m	721	48
Hib1	C or H <12 months	57	12-23 m	721	48

Hib3	C or H <12 months	40	12-23 m	721	48
Hib3	Card	27	12-23 m	721	48
Hib3	Card or History	43	12-23 m	721	48
Hib3	History	16	12-23 m	721	48
MCV	Card or History	65	12-23 m	721	48
MCV	History	34	12-23 m	721	48
MCV	C or H <12 months	59	12-23 m	721	48
MCV	Card	31	12-23 m	721	48
Pol1	C or H <12 months	79	12-23 m	721	48
Pol1	Card	45	12-23 m	721	48
Pol1	Card or History	81	12-23 m	721	48
Pol1	History	36	12-23 m	721	48
Pol3	C or H <12 months	60	12-23 m	721	48
Pol3	Card	36	12-23 m	721	48
Pol3	History	27	12-23 m	721	48
Pol3	Card or History	63	12-23 m	721	48

2002 The Family Health Survey in the Republic of Yemen 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	55	12-23 m	2058	27
DTP1	Card	56	12-23 m	2058	27
DTP3	Card	45	12-23 m	2058	27
MCV	Card	45	12-23 m	2058	27
Pol1	Card	62	12-23 m	2058	27
Pol3	Card	47	12-23 m	2058	27

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

Yemen

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	30
1998	39
1999	41
2000	54
2001	58
2002	68
2003	65
2004	69
2005	59
2006	56
2007	52
2008	63
2009	66
2010	66

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.