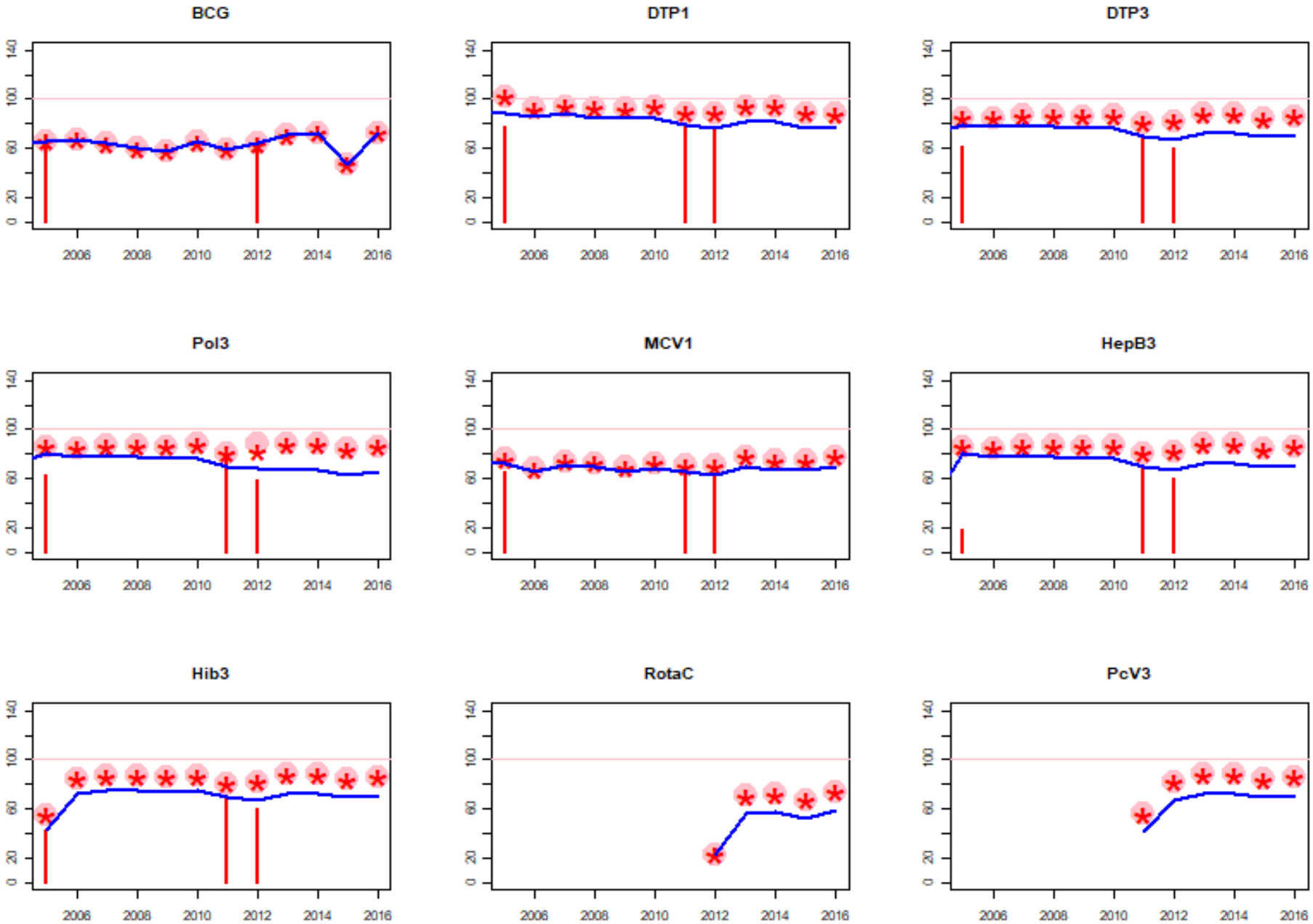

BCG
DTP1
DTP3
Pol3
MCV1
HepB3
Hib3
RotaC
PcV3
0
20
60
100
140
2006
2008
2010
2012
2014
2016

BACKGROUND NOTE: Each year WHO and UNICEF jointly review reports submitted by Member States regarding national immunization coverage, finalized survey reports as well as data from the published and grey literature. Based on these data, with due consideration to potential biases and the views of local experts, WHO and UNICEF attempt to distinguish between situations where the available empirical data accurately reflect immunization system performance and those where the data are likely to be compromised and present a misleading view of immunization coverage while jointly estimating the most likely coverage levels for each country.

WHO and UNICEF estimates are country-specific; that is to say, each country's data are reviewed individually, and data are not borrowed from other countries in the absence of data. Estimates are not based on ad hoc adjustments to reported data; in some instances empirical data are available from a single source, usually the nationally reported coverage data. In cases where no data are available for a given country/vaccine/year combination, data are considered from earlier and later years and interpolated to estimate coverage for the missing year(s). In cases where data sources are mixed and show large variation, an attempt is made to identify the most likely estimate with consideration of the possible biases in available data. For methods see:

*Burton et al. 2009. WHO and UNICEF estimates of national infant immunization coverage: methods and processes.
*Burton et al. 2012. A formal representation of the WHO and UNICEF estimates of national immunization coverage: a computational logic approach.
*Brown et al. 2013. An introduction to the grade of confidence used to characterize uncertainty around the WHO and UNICEF estimates of national immunization coverage.

DATA SOURCES.

ADMINISTRATIVE coverage: Reported by national authorities and based on aggregated administrative reports from health service providers on the number of vaccinations administered during a given period (numerator data) and reported target population data (denominator data). May be biased by inaccurate numerator and/or denominator data.

OFFICIAL coverage: Estimated coverage reported by national authorities that reflects their assessment of the most likely coverage based on any combination of administrative coverage, survey-based estimates or other data sources or adjustments. Approaches to determine OFFICIAL coverage may differ across countries.

SURVEY coverage: Based on estimated coverage from population-based household surveys among children aged 12-23 months or 24-35 months following a review of survey methods and results. Information is based on the combination of vaccination history from documented evidence or caregiver recall. Survey results are considered for the appropriate birth cohort based on the period of data collection.

ABBREVIATIONS

BCG: percentage of births who received one dose of Bacillus Calmette Guerin vaccine.

DTP1 / DTP3: percentage of surviving infants who received the 1st / 3rd dose, respectively, of diphtheria and tetanus toxoid with pertussis containing vaccine.

Pol3: percentage of surviving infants who received the 3rd dose of polio containing vaccine. May be either oral or inactivated polio vaccine.

IPV1: percentage of surviving infants who received at least one dose of inactivated polio vaccine. In countries utilizing an immunization schedule recommending either (i) a primary series of three doses of oral polio vaccine (OPV) plus at least one dose of IPV where OPV is included in routine immunization and/or campaign or (ii) a sequential schedule of IPV followed by OPV, WHO and UNICEF estimates for IPV1 reflect coverage with at least one routine dose of IPV among infants <1 year of age among countries. For countries utilizing IPV containing vaccine use only, i.e., no recommended dose of OPV, the WHO and UNICEF estimate for IPV1 corresponds to coverage for the 1st dose of IPV.

Production of IPV coverage estimates, which begins in 2015, results in no change of the estimated coverage levels for the 3rd dose of polio (Pol3). For countries recommending routine immunization with a primary series of three doses of IPV alone, WHO and UNICEF estimated Pol3 coverage is equivalent to estimated coverage with three doses of IPV. For countries with a sequential schedule, estimated Pol3 coverage is based on that for the 3rd dose of polio vaccine regardless of vaccine type.

MCV1: percentage of surviving infants who received the 1st dose of measles containing vaccine. In countries where the national schedule recommends the 1st dose of MCV at 12 months or later based on the epidemiology of disease in the country, coverage estimates reflect the percentage of children who received the 1st dose of MCV as recommended.

MCV2: percentage of children who received the 2nd dose of measles containing vaccine according to the nationally recommended schedule.

RCV1: percentage of surviving infants who received the 1st dose of rubella containing vaccine. Co verage estimates are based on WHO and UNICEF estimates of coverage for the dose of measles containing vaccine that corresponds to the first measles-rubella combination vaccine. Nationally reported coverage of RCV is not taken into consideration nor are the data represented in the accompanying graph and data table.

HepBB: percentage of births which received a dose of hepatitis B vaccine within 24 hours of delivery. Estimates of hepatitis B birth dose coverage are producted only for countries with a universal birth dose policy. Estimates are not produced for countries that recommend a birth dose to infants born to HepB virus-infected mothers only or where there is insufficient information to determine whether vaccination is within 24 hours of birth.

HepB3: percentage of surviving infants who received the 3rd dose of hepatitis B containing vaccine following the birth dose.

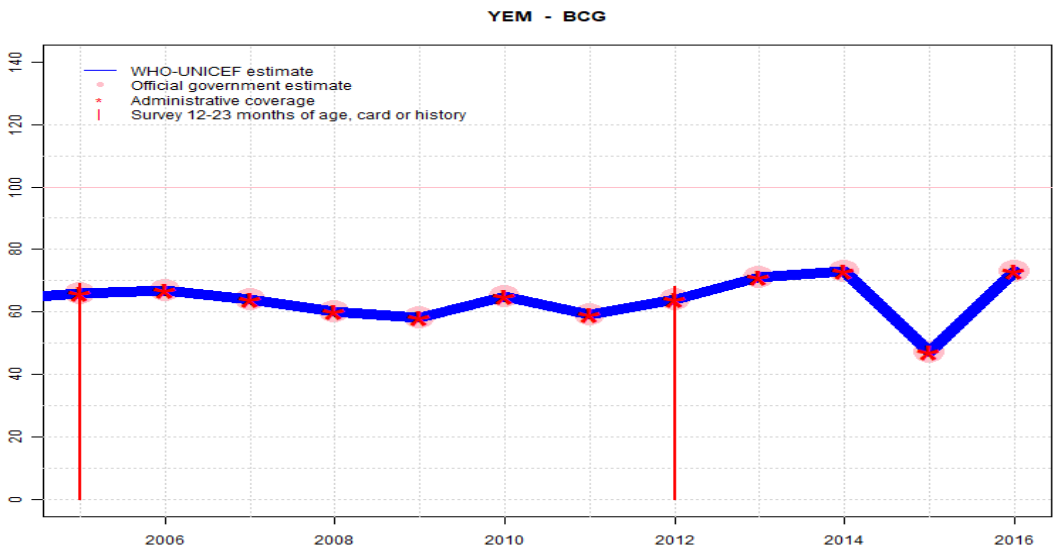
Hib3: percentage of surviving infants who received the 3rd dose of Haemophilus influenzae type b containing vaccine.

RotaC: percentage of surviving infants who received the final recommended dose of rotavirus vaccine, which can be either the 2nd or the 3rd dose depending on the vaccine.

PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect the percentage of surviving infants who received two doses of PcV prior to the 1st birthday.

YFV: percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

Yemen - BCG



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	66	67	64	60	58	65	59	64	71	73	47	73
Estimate GoC	••	••	••	••	••	•••	•••	•••	•••	•••	••	•
Official	66	67	64	60	58	65	59	64	71	73	47	73
Administrative	66	67	64	60	58	65	59	64	71	73	47	73
Survey	69	NA	NA	NA	NA	NA	NA	68	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

•• Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

• There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Estimate based on coverage reported by national government. Estimate reflects recovery from stock-out in 2015. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Programme reports six month vaccine stock-out at national level. GoC=R+ D+

2014: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2013: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2012: Estimate based on coverage reported by national government supported by survey. Survey evidence of 68 percent based on 1 survey(s). GoC=R+ S+ D+

2011: Estimate based on coverage reported by national government. Decline in immunization coverage partially due to disruptions in immunization delivery due to the political disturbances and prevailing insecurity. GoC=R+ S+ D+

2010: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2009: Estimate based on coverage reported by national government. GoC=R+ D+

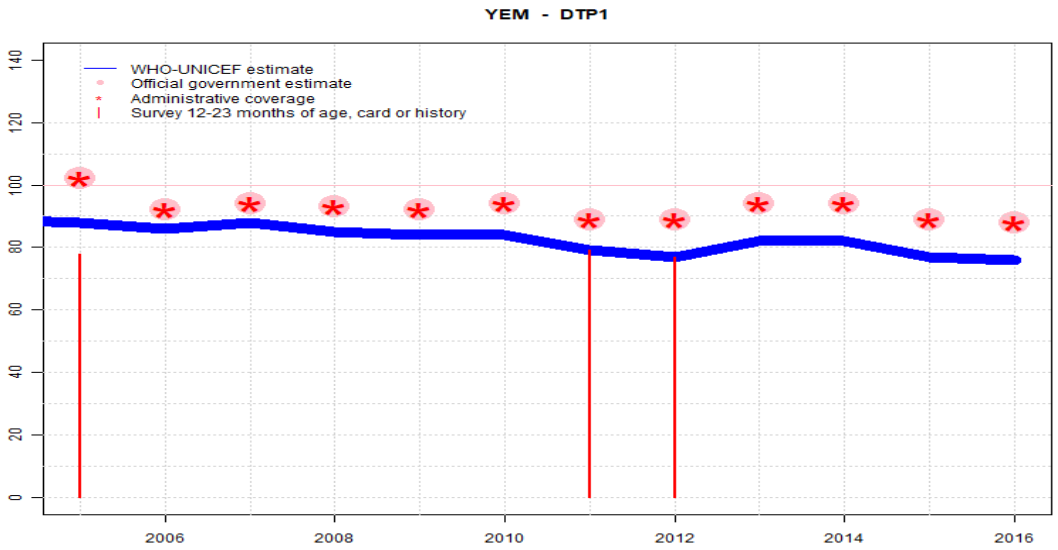
2008: Estimate based on coverage reported by national government. GoC=R+ D+

2007: Estimate based on coverage reported by national government. GoC=R+ D+

2006: Estimate based on coverage reported by national government. GoC=R+ D+

2005: Estimate based on coverage reported by national government. Yemen Multiple Indicator Cluster Survey 2006, Final Report results ignored by working group. 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. GoC=R+ D+

Yemen - DTP1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	88	86	88	85	84	84	79	77	82	82	77	76
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	102	92	94	93	92	94	89	89	94	94	89	88
Administrative	102	92	94	93	92	94	89	89	94	94	89	88
Survey	78	NA	NA	NA	NA	NA	79	77	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 levels. Government reports that offical estimates are derived from the administrative coverage. Civil unrest began in February-March 2015 but exceptionally does not appear to have impacted delivery of immunization services in spite of disruptions to other health areas. Programme reports that vaccination sites continue to send monthly reports to the district. Estimate challenged by: D-R-

2014: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 77 percent based on 1 survey(s). Estimate challenged by: D-R-

2011: Estimate of 79 percent assigned by working group. Estimate is based on survey coverage level. Decline in immunization coverage partially due to disruptions in immunization delivery due to the political disturbances and prevailing insecurity. Estimate of 79 percent changed from previous revision value of 78 percent. Estimate challenged by: D-R-

2010: Reported data calibrated to 1999 and 2011 levels. Estimate challenged by: D-R-

2009: Reported data calibrated to 1999 and 2011 levels. Estimate of 84 percent changed from previous revision value of 83 percent. Estimate challenged by: R-

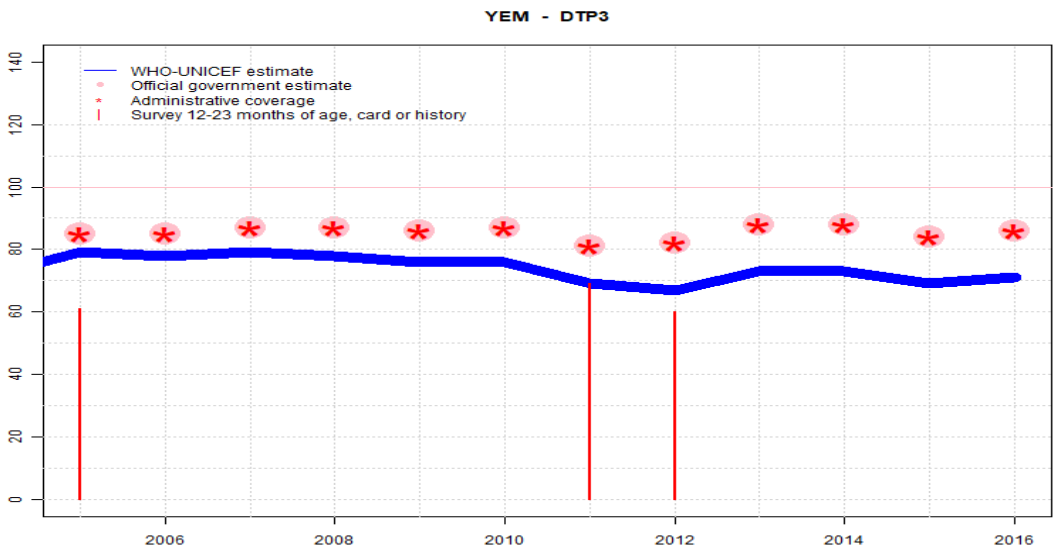
2008: Reported data calibrated to 1999 and 2011 levels. Estimate challenged by: R-

2007: Reported data calibrated to 1999 and 2011 levels. Estimate of 88 percent changed from previous revision value of 87 percent. Estimate challenged by: R-

2006: Reported data calibrated to 1999 and 2011 levels. Estimate of 86 percent changed from previous revision value of 85 percent. Estimate challenged by: R-

2005: Reported data calibrated to 1999 and 2011 levels. Yemen Multiple Indicator Cluster Survey 2006, Final Report results ignored by working group. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005.Reported data excluded because 102 percent greater than 100 percent. DTP-HepB-Hib pentavalent vaccine introduced during April 2005. Estimate challenged by: D-R-

Yemen - DTP3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	79	78	79	78	76	76	69	67	73	73	69	71
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	85	85	87	87	86	87	81	82	88	88	84	86
Administrative	85	85	87	87	86	87	81	82	88	88	84	86
Survey	61	NA	NA	NA	NA	NA	69	60	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 levels. Government reports that offical estimates are derived from the administrative coverage. Civil unrest began in February-March 2015 but exceptionally does not appear to have impacted delivery of immunization services in spite of disruptions to other health areas. Programme reports that vaccination sites continue to send monthly reports to the district. Estimate challenged by: D-R-

2014: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 67 percent based on 1 survey(s). Yemen National Health and Demographic Survey, 2013 card or history results of 60 percent modifed for recall bias to 67 percent based on 1st dose card or history coverage of 77 percent, 1st dose card only coverage of 46 percent and 3d dose card only coverage of 40 percent. Estimate challenged by: D-R-

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 69 percent based on 1 survey(s). Decline in immunization coverage partially due to disruptions in immunization delivery due to the political disturbances and prevailing insecurity. Estimate of 69 percent changed from previous revision value of 67 percent. Estimate challenged by: D-R-

2010: Reported data calibrated to 1998 and 2011 levels. Disaggregated coverage data show 58 percent coverage through routine services and 28 percent coverage through outreach activities conducted over 4 rounds in 2010. Estimate of 76 percent changed from previous revision value of 74 percent. Estimate challenged by: D-R-

2009: Reported data calibrated to 1998 and 2011 levels. Disaggregated coverage data show 58 percent coverage through routine services and 28 percent coverage through outreach activities conducted over 4 rounds in 2009. Estimate of 76 percent changed from previous revision value of 74 percent. Estimate challenged by: D-R-

2008: Reported data calibrated to 1998 and 2011 levels. Disaggregated coverage data show 57 percent coverage through routine services and 30 percent coverage through outreach activities conducted over 4 rounds in 2008. Estimate of 78 percent changed from previous revision value of 76 percent. Estimate challenged by: R-

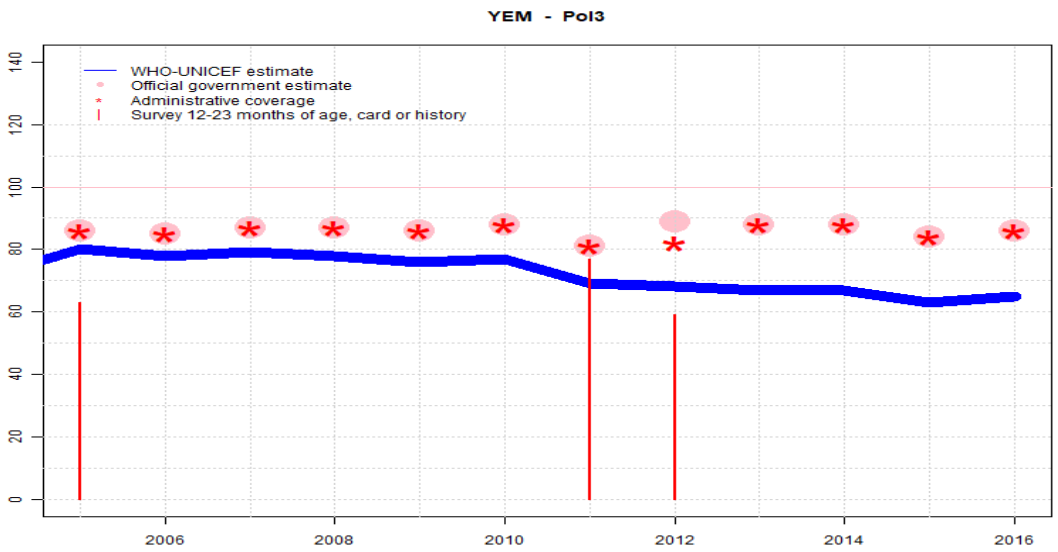
2007: Reported data calibrated to 1998 and 2011 levels. Disaggregated coverage data show 58 percent coverage through routine services and 27 percent coverage through outreach activities conducted over 6 rounds in 2007. Estimate of 79 percent changed from previous revision value of 77 percent. Estimate challenged by: R-

2006: Reported data calibrated to 1998 and 2011 levels. Disaggregated coverage data show 58 percent coverage through routine services and 27 percent coverage through outreach activities conducted over 5 rounds in 2006. Estimate of 78 percent changed from previous revision value of 76 percent. Estimate challenged by: R-

2005: Reported data calibrated to 1998 and 2011 levels. Yemen Multiple Indicator Cluster Survey 2006, Final Report results ignored by working group. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004

to September 2005.Yemen Multiple Indicator Cluster Survey 2006, Final Report card or history results of 61 percent modifed for recall bias to 65 percent based on 1st dose card or history coverage of 78 percent, 1st dose card only coverage of 47 percent and 3d dose card only coverage of 39 percent. DTP-HepB-Hib pentavalent vaccine introduced during April 2005. Estimate of 79 percent changed from previous revision value of 78 percent. Estimate challenged by: R-

Yemen - Pol3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	80	78	79	78	76	77	69	68	67	67	63	65
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	86	85	87	87	86	88	81	89	88	88	84	86
Administrative	86	85	87	87	86	88	81	82	88	88	84	86
Survey	63	NA	NA	NA	NA	NA	77	59	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 levels. Government reports that offical estimates are derived from the administrative coverage. Civil unrest began in February-March 2015 but exceptionally does not appear to have impacted delivery of immunization services in spite of disruptions to other health areas. Programme reports that vaccination sites continue to send monthly reports to the district. Estimate challenged by: D-R-

2014: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 68 percent based on 1 survey(s). Yemen National Health and Demographic Survey, 2013 card or history results of 59 percent modifed for recall bias to 68 percent based on 1st dose card or history coverage of 76 percent, 1st dose card only coverage of 46 percent and 3d dose card only coverage of 41 percent. Estimate challenged by: D-R-

2011: Estimate of 69 percent assigned by working group. Estimate is based on estimated DTP3 coverage level. Yemen National Social Protection Monitoring Survey (NSPMS): 2012-2013 results ignored by working group. Survey results likely include campaign doses. Decline in immunization coverage partially due to disruptions in immunization delivery due to the political disturbances and prevailing insecurity. Estimate of 69 percent changed from previous revision value of 61 percent. Estimate challenged by: D-R-

2010: Reported data calibrated to 1998 and 2011 levels. Estimate of 77 percent changed from previous revision value of 70 percent. Estimate challenged by: D-R-

2009: Reported data calibrated to 1998 and 2011 levels. Estimate of 76 percent changed from previous revision value of 69 percent. Estimate challenged by: D-R-

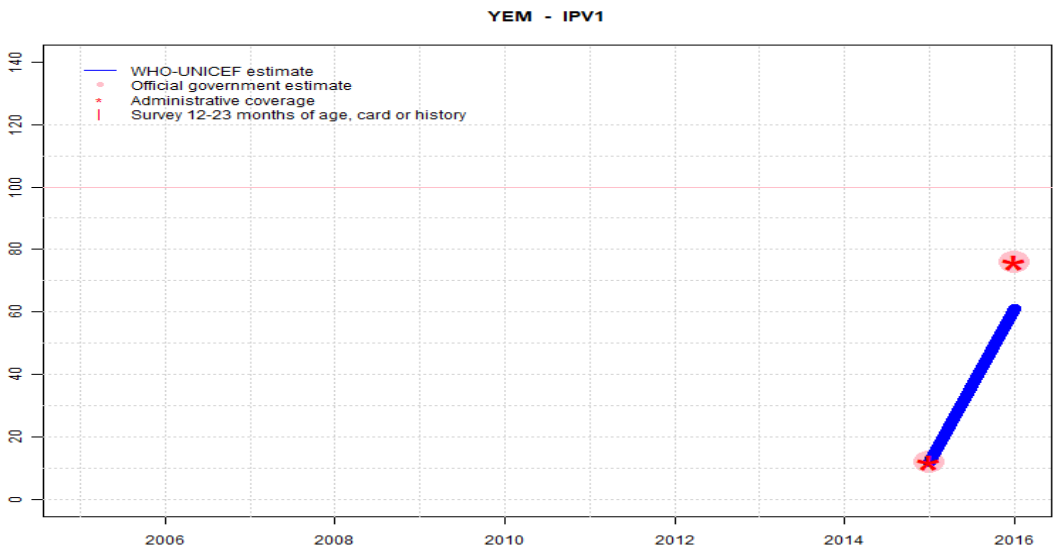
2008: Reported data calibrated to 1998 and 2011 levels. Estimate of 78 percent changed from previous revision value of 72 percent. Estimate challenged by: R-

2007: Reported data calibrated to 1998 and 2011 levels. Estimate of 79 percent changed from previous revision value of 73 percent. Estimate challenged by: R-

2006: Reported data calibrated to 1998 and 2011 levels. Estimate of 78 percent changed from previous revision value of 73 percent. Estimate challenged by: R-

2005: Reported data calibrated to 1998 and 2011 levels. Yemen Multiple Indicator Cluster Survey 2006, Final Report results ignored by working group. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005.Yemen Multiple Indicator Cluster Survey 2006, Final Report card or history results of 63 percent modifed for recall bias to 65 percent based on 1st dose card or history coverage of 81 percent, 1st dose card only coverage of 45 percent and 3d dose card only coverage of 36 percent. Estimate of 80 percent changed from previous revision value of 75 percent. Estimate challenged by: R-

Yemen - IPV1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	61
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	76
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	76
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

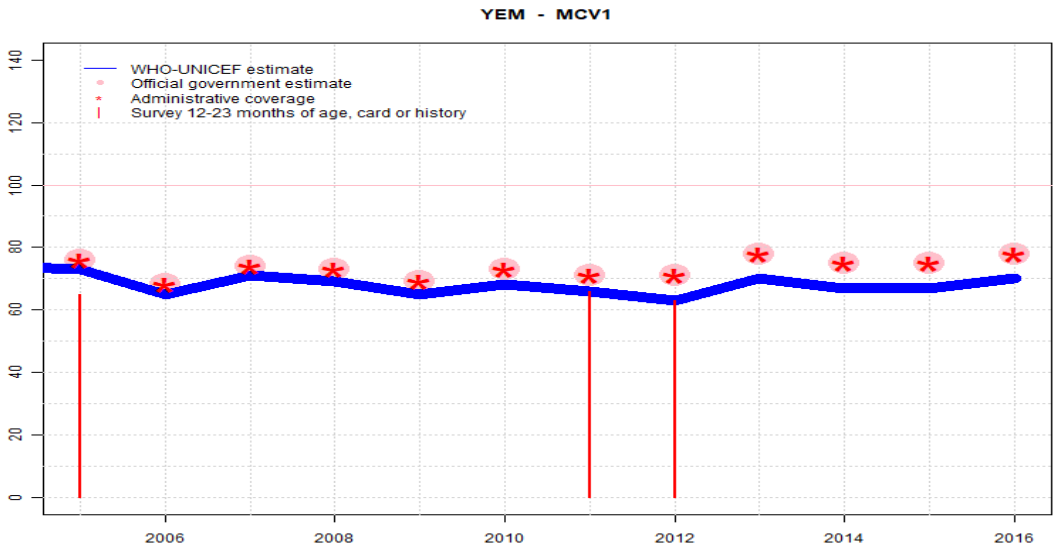
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Estimate of 61 percent assigned by working group. Estimate is based on the difference between estimated and reported DTP3 coverage level. Estimate is based on reported data following introduction. Estimate challenged by: D-R-

2015: Estimate is based on reported coverage during introduction. IPV introduced during November 2015. Government reports that offical estimates are derived from the administrative coverage. Civil unrest began in February-March 2015 but exceptionally does not appear to have impacted delivery of immunization services in spite of disruptions to other health areas. Programme reports that vaccination sites continue to send monthly reports to the district. GoC=Assigned by working group. Consistency with other vaccines.

Yemen - MCV1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	73	65	71	69	65	68	66	63	70	67	67	70
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	76	68	74	73	69	73	71	71	78	75	75	78
Administrative	76	68	74	73	69	73	71	71	78	75	75	78
Survey	65	NA	NA	NA	NA	NA	66	63	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 levels. Government reports that offical estimates are derived from the administrative coverage. Civil unrest began in February-March 2015 but exceptionally does not appear to have impacted delivery of immunization services in spite of disruptions to other health areas. Programme reports that vaccination sites continue to send monthly reports to the district. Estimate challenged by: D-R-

2014: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2012: Estimate of 63 percent assigned by working group. Estimate based on survey result. Estimate challenged by: D-R-

2011: Estimate of 66 percent assigned by working group. Estimate is based on survey coverage level. Decline in immunization coverage partially due to disruptions in immunization delivery due to the political disturbances and prevailing insecurity. Estimate of 66 percent changed from previous revision value of 63 percent. Estimate challenged by: R-

2010: Reported data calibrated to 1998 and 2011 levels. Estimate of 68 percent changed from previous revision value of 66 percent. Estimate challenged by: R-

2009: Reported data calibrated to 1998 and 2011 levels. Estimate of 65 percent changed from previous revision value of 63 percent. Estimate challenged by: R-

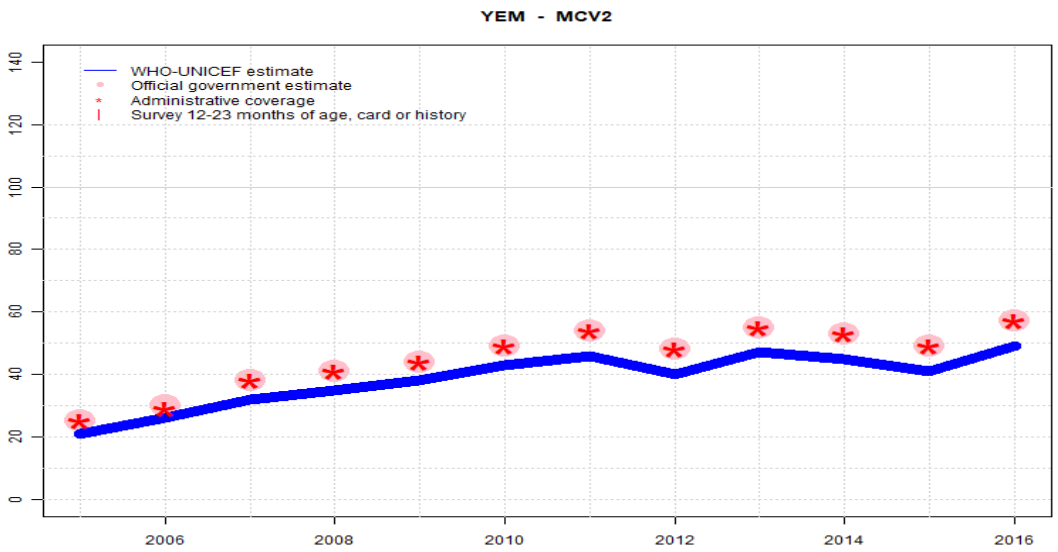
2008: Reported data calibrated to 1998 and 2011 levels. Estimate of 69 percent changed from previous revision value of 67 percent. Estimate challenged by: R-

2007: Reported data calibrated to 1998 and 2011 levels. Estimate of 71 percent changed from previous revision value of 69 percent. Estimate challenged by: R-

2006: Reported data calibrated to 1998 and 2011 levels. Estimate of 65 percent changed from previous revision value of 63 percent. Estimate challenged by: R-

2005: Reported data calibrated to 1998 and 2011 levels. Yemen Multiple Indicator Cluster Survey 2006, Final Report results ignored by working group. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005. Estimate of 73 percent changed from previous revision value of 72 percent. Estimate challenged by: R-

Yemen - MCV2



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	21	26	32	35	38	43	46	40	47	45	41	49
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	25	30	38	41	44	49	54	48	55	53	49	57
Administrative	25	29	38	41	44	49	54	48	55	53	49	57
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

Coverage estimates for the second dose of measles containing vaccine are for children by the nationally recommended age.

2016: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 levels. Government reports that offical estimates are derived from the administrative coverage. Civil unrest began in February-March 2015 but exceptionally does not appear to have impacted delivery of immunization services in spite of disruptions to other health areas. Programme reports that vaccination sites continue to send monthly reports to the district. Estimate challenged by: D-R-

2014: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2012: Estimate of 40 percent assigned by working group. Estimate is based on adjustment to reported coverage level based on difference between estimated and reported coverage levels for MCV1. Estimate challenged by: D-R-

2011: Reported data calibrated to 2005 and 2012 levels. Decline in immunization coverage partially due to disruptions in immunization delivery due to the political disturbances and prevailing insecurity. Estimate challenged by: D-R-

2010: Reported data calibrated to 2005 and 2012 levels. Estimate challenged by: R-

2009: Reported data calibrated to 2005 and 2012 levels. Estimate challenged by: R-

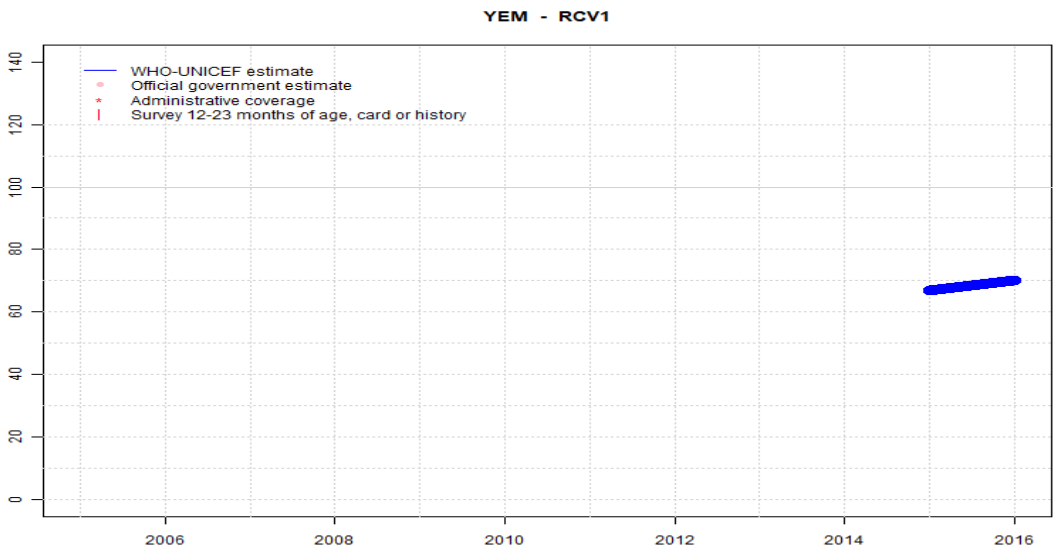
2008: Reported data calibrated to 2005 and 2012 levels. Estimate challenged by: R-

2007: Reported data calibrated to 2005 and 2012 levels. Estimate challenged by: R-

2006: Reported data calibrated to 2005 and 2012 levels. Estimate challenged by: R-

2005: Estimate of 21 percent assigned by working group. Estimate is based on adjustment to reported coverage level based on difference between estimated and reported coverage levels for MCV1. Estimate challenged by: R-

Yemen - RCV1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	67	70
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•
Official	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
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

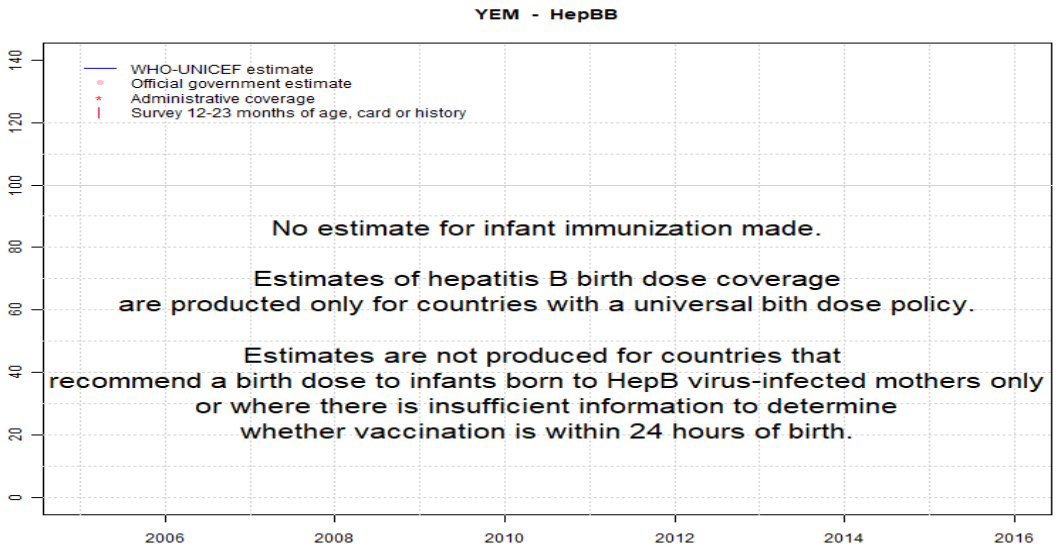
Description:

For this revision, coverage estimates for the first dose of rubella containing vaccine are based on WHO and UNICEF estimates of coverage of measles containing vaccine. Nationally reported coverage of rubella containing vaccine is not taken into consideration nor are they represented in the the accompanying graph and data table.

2016: Estimate based on estimated MCV1. Estimate challenged by: D-R-

2015: Estimate based on estimated MCV1. Rubella containing vaccine introduced during 2015 using measles rubella combination vaccine. Government reports that offical estimates are derived from the administrative coverage. Civil unrest began in February-March 2015 but exceptionally does not appear to have impacted delivery of immunization services in spite of disruptions to other health areas. Programme reports that vaccination sites continue to send monthly reports to the district. Estimate challenged by: D-R-

Yemen - HepBB



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	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
Administrative	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

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

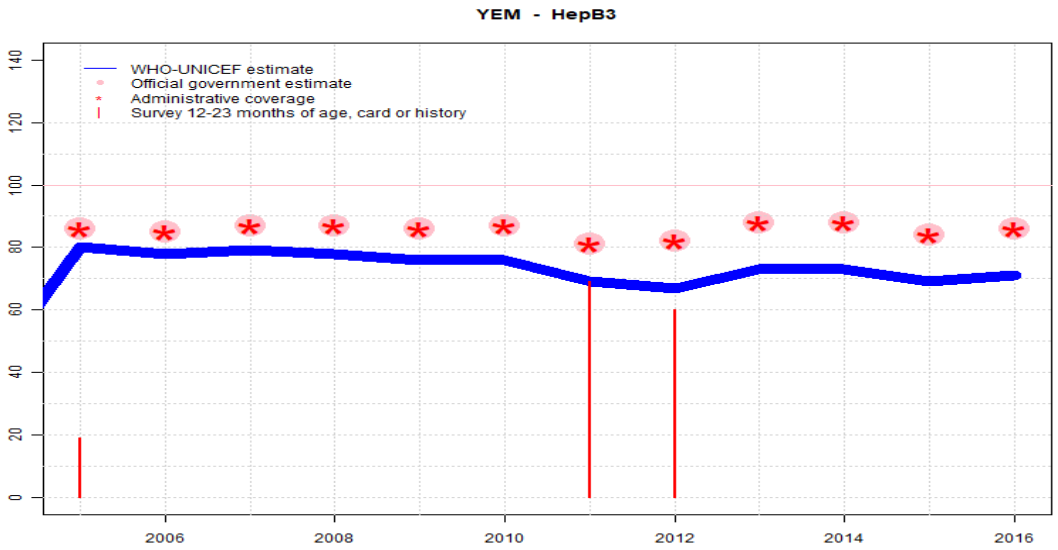
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Yemen - HepB3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	80	78	79	78	76	76	69	67	73	73	69	71
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	86	85	87	87	86	87	81	82	88	88	84	86
Administrative	86	85	87	87	86	87	81	82	88	88	84	86
Survey	19	NA	NA	NA	NA	NA	69	60	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2014: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 67 percent based on 1 survey(s). Yemen National Health and Demographic Survey, 2013 card or history results of 60 percent modifed for recall bias to 67 percent based on 1st dose card or history coverage of 77 percent, 1st dose card only coverage of 46 percent and 3d dose card only coverage of 40 percent. Estimate challenged by: D-R-

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 69 percent based on 1 survey(s). Decline in immunization coverage partially due to disruptions in immunization delivery due to the political disturbances and prevailing insecurity. Estimate of 69 percent changed from previous revision value of 68 percent. Estimate challenged by: D-R-

2010: Reported data calibrated to 1999 and 2011 levels. Estimate of 76 percent changed from previous revision value of 74 percent. Estimate challenged by: D-R-

2009: Reported data calibrated to 1999 and 2011 levels. Estimate of 76 percent changed from previous revision value of 75 percent. Estimate challenged by: D-R-

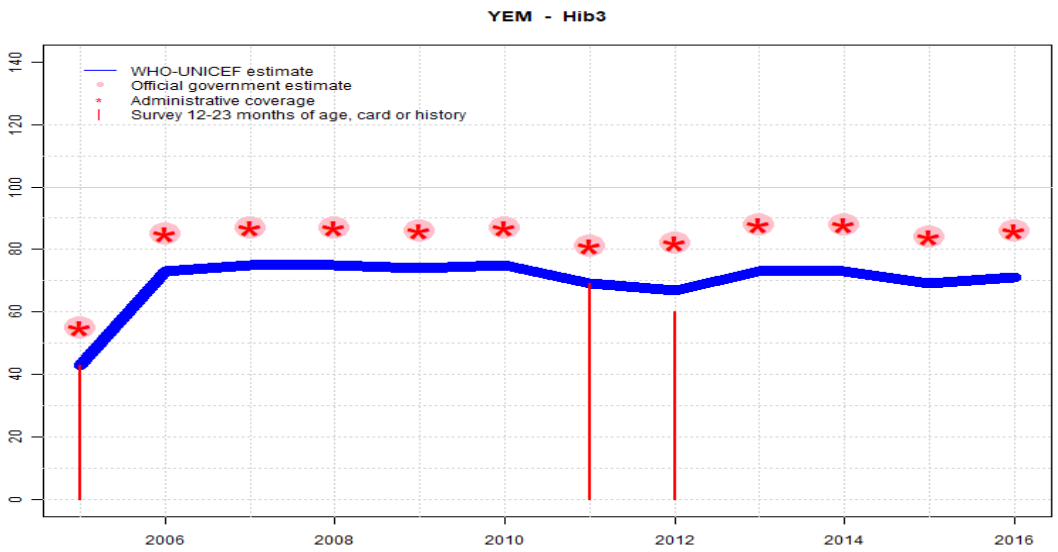
2008: Reported data calibrated to 1999 and 2011 levels. Estimate of 78 percent changed from previous revision value of 76 percent. Estimate challenged by: R-

2007: Reported data calibrated to 1999 and 2011 levels. Estimate of 79 percent changed from previous revision value of 78 percent. Estimate challenged by: R-

2006: Reported data calibrated to 1999 and 2011 levels. Estimate of 78 percent changed from previous revision value of 77 percent. Estimate challenged by: R-

2005: Reported data calibrated to 1999 and 2011 levels. Yemen Multiple Indicator Cluster Survey 2006, Final Report results ignored by working group. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005.Yemen Multiple Indicator Cluster Survey 2006, Final Report card or history results of 19 percent modifed for recall bias to 21 percent based on 1st dose card or history coverage of 28 percent, 1st dose card only coverage of 12 percent and 3d dose card only coverage of 9 percent. DTP-HepB-Hib pentavalent vaccine introduced during April 2005. Estimate of 80 percent changed from previous revision value of 79 percent. Estimate challenged by: R-

Yemen - Hib3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	43	73	75	75	74	75	69	67	73	73	69	71
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	55	85	87	87	86	87	81	82	88	88	84	86
Administrative	55	85	87	87	86	87	81	82	88	88	84	86
Survey	43	NA	NA	NA	NA	NA	69	60	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2014: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2012: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 67 percent based on 1 survey(s). Yemen National Health and Demographic Survey, 2013 card or history results of 60 percent modifed for recall bias to 67 percent based on 1st dose card or history coverage of 77 percent, 1st dose card only coverage of 46 percent and 3d dose card only coverage of 40 percent. Estimate challenged by: D-R-

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 69 percent based on 1 survey(s). Decline in immunization coverage partially due to disruptions in immunization delivery due to the political disturbances and prevailing insecurity. Estimate of 69 percent changed from previous revision value of 66 percent. Estimate challenged by: D-R-

2010: Reported data calibrated to 2011 levels. Estimate of 75 percent changed from previous revision value of 72 percent. Estimate challenged by: D-R-

2009: Reported data calibrated to 2011 levels. Estimate of 74 percent changed from previous revision value of 71 percent. Estimate challenged by: D-R-

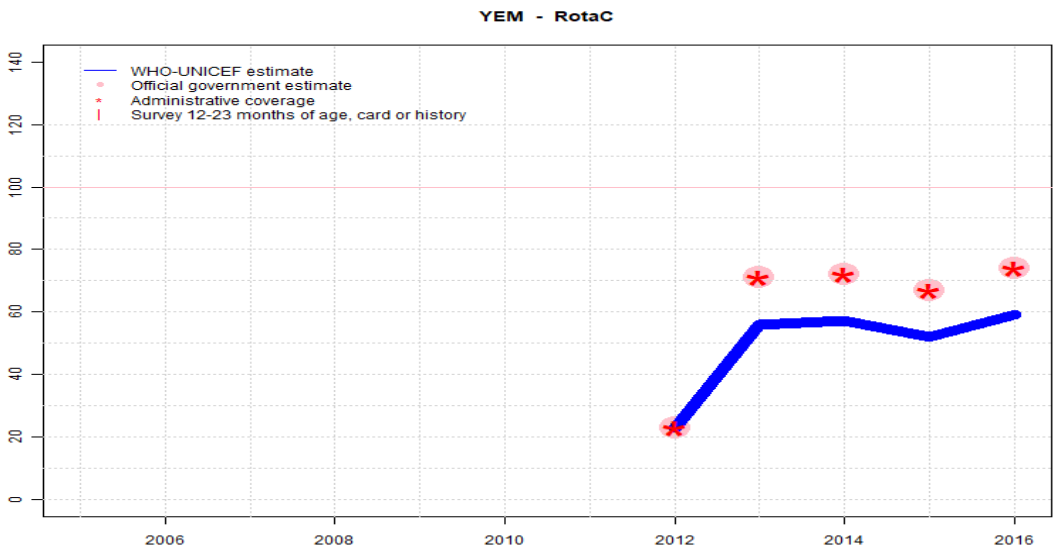
2008: Reported data calibrated to 2011 levels. Estimate of 75 percent changed from previous revision value of 72 percent. Estimate challenged by: D-R-

2007: Reported data calibrated to 2011 levels. Estimate of 75 percent changed from previous revision value of 72 percent. Estimate challenged by: D-R-

2006: Reported data calibrated to 2011 levels. Estimate of 73 percent changed from previous revision value of 70 percent. Estimate challenged by: R-

2005: Reported data calibrated to 2011 levels. Yemen Multiple Indicator Cluster Survey 2006, Final Report results ignored by working group. Survey results refer to immunizations of children less than one year of age vaccinated between October 2004 to September 2005.Yemen Multiple Indicator Cluster Survey 2006, Final Report card or history results of 43 percent modifed for recall bias to 48 percent based on 1st dose card or history coverage of 59 percent, 1st dose card only coverage of 33 percent and 3d dose card only coverage of 27 percent. DTP-HepB-Hib pentavalent vaccine introduced during April 2005. Estimate of 43 percent changed from previous revision value of 40 percent. Estimate challenged by: D-R-

Yemen - RotaC



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	23	56	57	52	59
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	23	71	72	67	74
Administrative	NA	NA	NA	NA	NA	NA	NA	23	71	72	67	74
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Reported data calibrated to 2013 levels. Estimate challenged by: D-R-

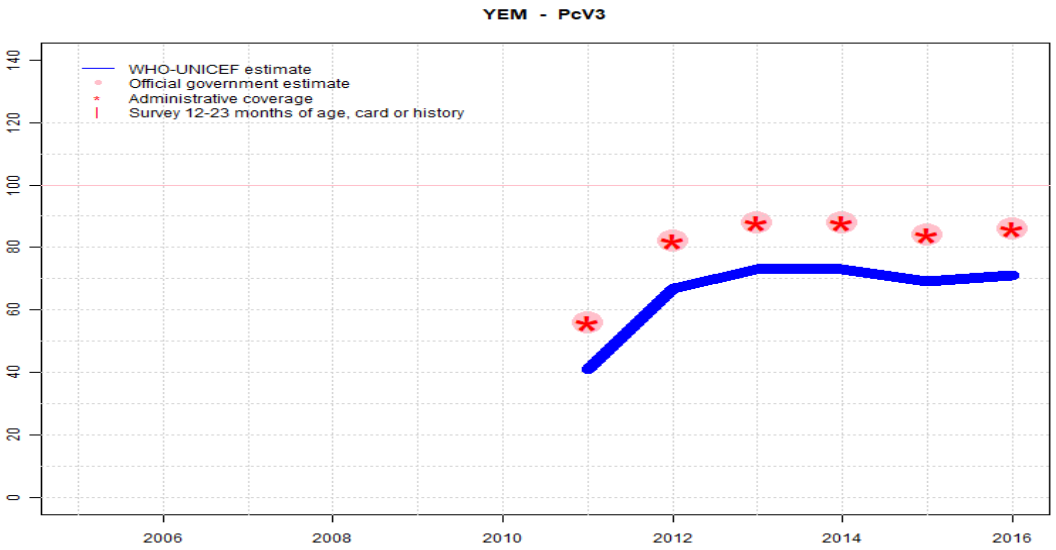
2015: Reported data calibrated to 2013 levels. Government reports that offical estimates are derived from the administrative coverage. Civil unrest began in February-March 2015 but exceptionally does not appear to have impacted delivery of immunization services in spite of disruptions to other health areas. Programme reports that vaccination sites continue to send monthly reports to the district. Estimate challenged by: D-R-

2014: Reported data calibrated to 2013 levels. Estimate challenged by: D-R-

2013: Estimate of 56 percent assigned by working group. Estimate is based on adjustment to reported coverage level based on difference between estimated and reported coverage levels for DTP3. Estimate challenged by: D-R-

2012: Estimate is based on reported coverage during introduction. Rotavirus vaccine was introduced in 2012. Estimate of 23 percent changed from previous revision value of 8 percent. GoC=Assigned by working group. Introduction period.

Yemen - PcV3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	41	67	73	73	69	71
Estimate GoC	NA	NA	NA	NA	NA	NA	•	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	56	82	88	88	84	86
Administrative	NA	NA	NA	NA	NA	NA	56	82	88	88	84	86
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

● There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2016: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2015: Reported data calibrated to 2012 levels. Government reports that offical estimates are derived from the administrative coverage. Civil unrest began in February-March 2015 but exceptionally does not appear to have impacted delivery of immunization services in spite of disruptions to other health areas. Programme reports that vaccination sites continue to send monthly reports to the district. Estimate challenged by: D-R-

2014: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 levels. Estimate challenged by: D-R-

2012: Estimate of 67 percent assigned by working group. Estimate is based on adjustment to reported coverage level based on difference between estimated and reported coverage levels for DTP3. Estimate challenged by: D-R-

2011: Reported data calibrated to 2012 levels. Decline in immunization coverage partially due to disruptions in immunization delivery due to the political disturbances and prevailing insecurity. Pneumococcal conjugate vaccine introduced in 2011. GoC=Assigned by working group. Introduction period.

Yemen - survey details

2012 Yemen National Health and Demographic Survey, 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	67	12-23 m	3028	47
BCG	Card	40	12-23 m	1427	47
BCG	Card or History	68	12-23 m	3028	47
BCG	History	27	12-23 m	1601	47
DTP1	C or H <12 months	75	12-23 m	3028	47
DTP1	Card	46	12-23 m	1427	47
DTP1	Card or History	77	12-23 m	3028	47
DTP1	History	31	12-23 m	1601	47
DTP3	C or H <12 months	58	12-23 m	3028	47
DTP3	Card	40	12-23 m	1427	47
DTP3	Card or History	60	12-23 m	3028	47
DTP3	History	19	12-23 m	1601	47
HepB1	C or H <12 months	75	12-23 m	3028	47
HepB1	Card	46	12-23 m	1427	47
HepB1	Card or History	77	12-23 m	3028	47
HepB1	History	31	12-23 m	1601	47
HepB3	C or H <12 months	58	12-23 m	3028	47
HepB3	Card	40	12-23 m	1427	47
HepB3	Card or History	60	12-23 m	3028	47
HepB3	History	19	12-23 m	1601	47
Hib1	C or H <12 months	75	12-23 m	3028	47
Hib1	Card	46	12-23 m	1427	47
Hib1	Card or History	77	12-23 m	3028	47
Hib1	History	31	12-23 m	1601	47
Hib3	C or H <12 months	58	12-23 m	3028	47
Hib3	Card	40	12-23 m	1427	47
Hib3	Card or History	60	12-23 m	3028	47
Hib3	History	19	12-23 m	1601	47
MCV1	C or H <12 months	51	12-23 m	3028	47
MCV1	Card	39	12-23 m	1427	47
MCV1	Card or History	63	12-23 m	3028	47
MCV1	History	24	12-23 m	1601	47
PcV1	Card	44	12-23 m	1427	47
PcV1	Card < 12 months	43	12-23 m	3028	47
PcV3	Card	38	12-23 m	1427	47
PcV3	Card < 12 months	37	12-23 m	3028	47
Pol1	C or H <12 months	74	12-23 m	3028	47
Pol1	Card	46	12-23 m	1427	47
Pol1	Card or History	76	12-23 m	3028	47
Pol1	History	30	12-23 m	1601	47
Pol3	C or H <12 months	57	12-23 m	3028	47
Pol3	Card	41	12-23 m	1427	47
Pol3	Card or History	59	12-23 m	3028	47
Pol3	History	18	12-23 m	1601	47

2011 Yemen National Social Protection Monitoring Survey (NSPMS): 2012-2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP1	C or H <12 months	60	12-23 m	5178	59
DTP1	Card or History	79	12-23 m	5178	59
DTP3	C or H <12 months	50	12-23 m	5178	59
DTP3	Card or History	69	12-23 m	5178	59
HepB1	C or H <12 months	60	12-23 m	5178	59
HepB1	Card or History	79	12-23 m	5178	59
HepB3	C or H <12 months	50	12-23 m	5178	59
HepB3	Card or History	69	12-23 m	5178	59
Hib1	C or H <12 months	60	12-23 m	5178	59
Hib1	Card or History	79	12-23 m	5178	59
Hib3	C or H <12 months	50	12-23 m	5178	59
Hib3	Card or History	69	12-23 m	5178	59
MCV1	C or H <12 months	40	12-23 m	5178	59
MCV1	Card or History	66	12-23 m	5178	59
Pol1	Card or History	86	12-23 m	5178	59
Pol3	Card or History	77	12-23 m	5178	59

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	C or H <12 months	77	12-23 m	721	48
DTP1	Card	47	12-23 m	721	48

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DTP1	Card or History	78	12-23 m	721	48
DTP1	History	32	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
DTP3	Card or History	61	12-23 m	721	48
DTP3	History	22	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
HepB1	History	16	12-23 m	721	48
HepB3	C or H <12 months	19	12-23 m	721	48
HepB3	Card	9	12-23 m	721	48
HepB3	Card or History	19	12-23 m	721	48
HepB3	History	11	12-23 m	721	48
Hib1	C or H <12 months	57	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
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
MCV1	C or H <12 months	59	12-23 m	721	48
MCV1	Card	31	12-23 m	721	48
MCV1	Card or History	65	12-23 m	721	48
MCV1	History	34	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	Card or History	63	12-23 m	721	48
Pol3	History	27	12-23 m	721	48

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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
MCV1	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 previous years are available at:
http://www.data.unicef.org/child-health/immunization
http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html