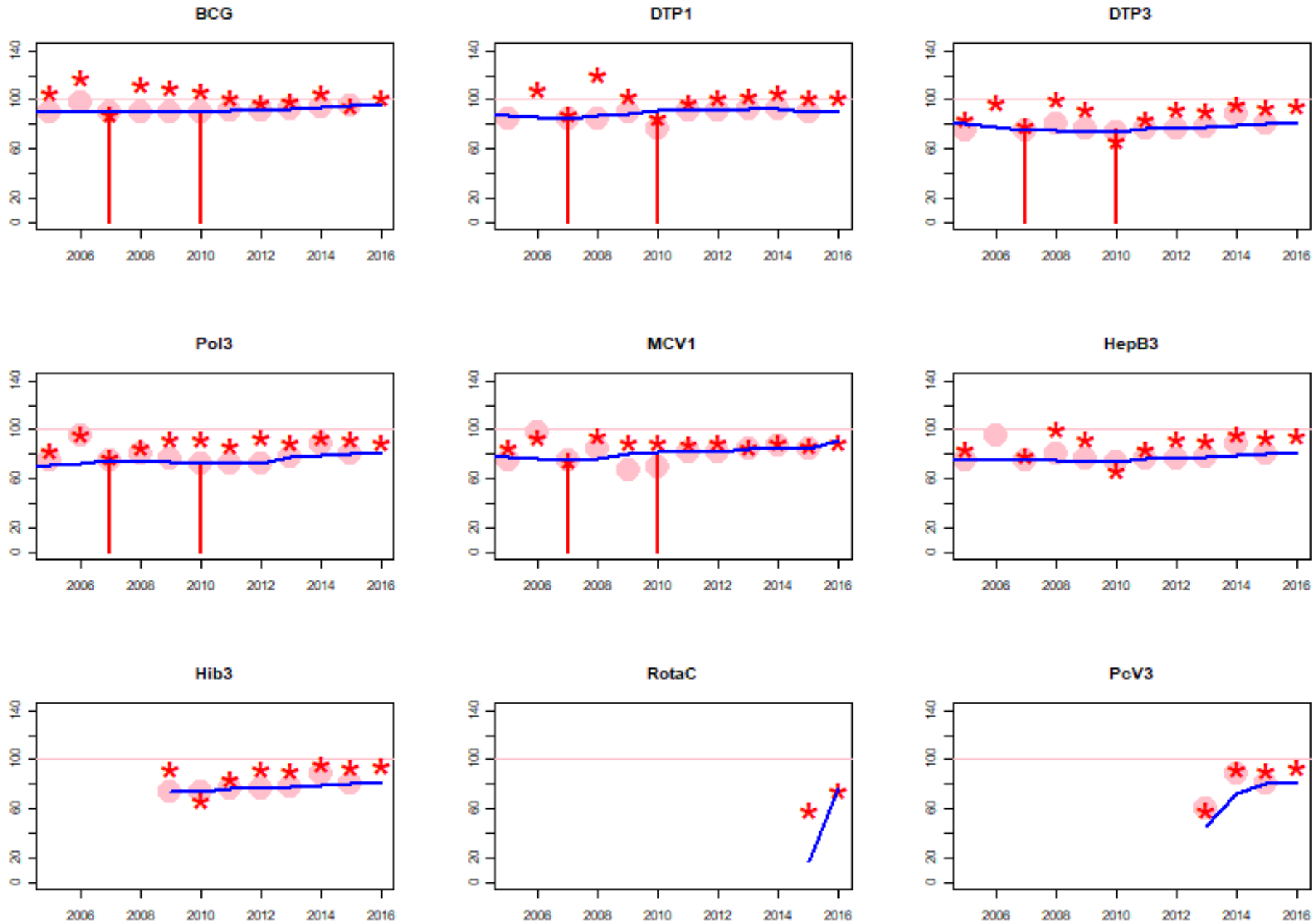


Mozambique: WHO and UNICEF estimates of immunization coverage: 2016 revision



**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. Coverage 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 produced 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.

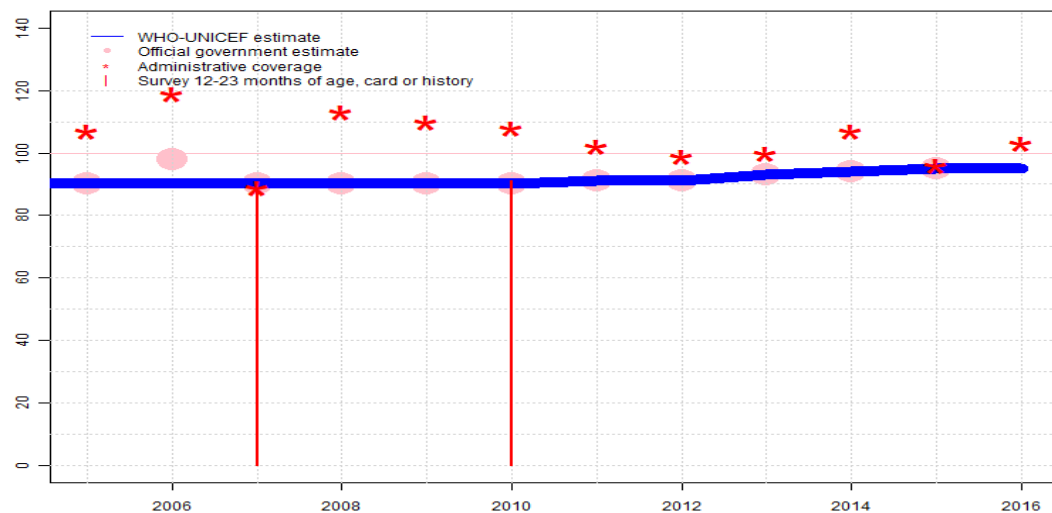
**PcV3:** percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

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# Mozambique - BCG

MOZ - BCG



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	90	90	90	90	90	90	91	91	93	94	95	95
Estimate GoC	•	•	•••	•	•	•	•••	•••	••	••	••	••
Official	90	98	90	90	90	90	91	91	93	94	95	NA
Administrative	107	119	89	113	110	108	102	99	100	107	96	103
Survey	NA	NA	88	NA	NA	91	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.

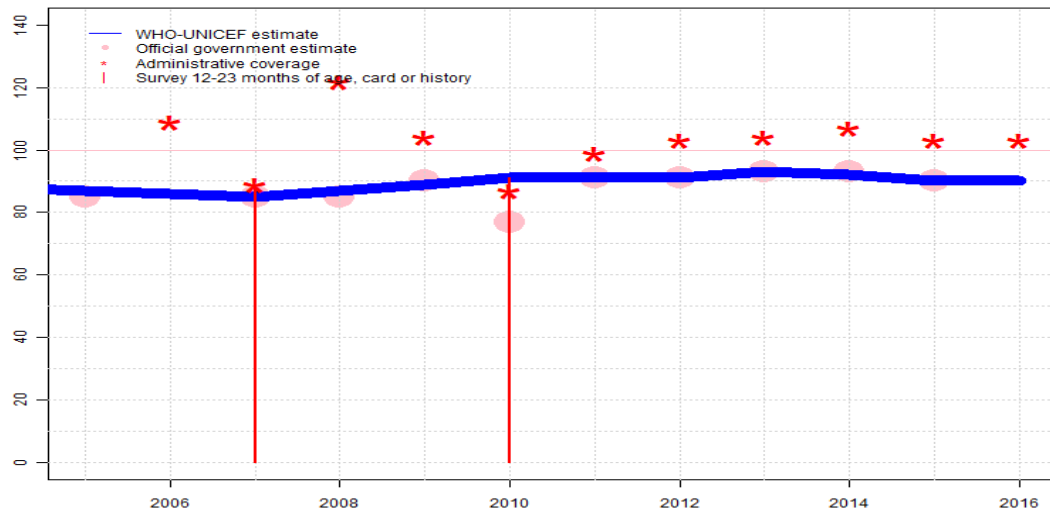
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2016: Estimate based on extrapolation from data reported by national government. Reported data excluded because 103 percent greater than 100 percent. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. Programme reports one month vaccine stock-out at national level. GoC=R+ D+
- 2014: Estimate based on interpolation between data reported by national government. Reported data excluded. Inconsistent and unexplained adjustment of official coverage from administrative data. Programme reports a decrease in the national target population for 2014 compared to 2013. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). National official estimates are based on projection from 2008 MICS survey results. Estimate challenged by: D-
- 2009: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: R-
- 2008: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: R-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). GoC=R+ S+ D+
- 2006: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Estimate challenged by: R-

# Mozambique - DTP1

MOZ - DTP1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	87	86	85	87	89	91	91	91	93	92	90	90
Estimate GoC	•	•	•••	•	•	•••	•••	•••	•	•	•	•
Official	85	NA	85	85	90	77	91	91	93	93	90	NA
Administrative	NA	109	89	122	104	87	99	103	104	107	103	103
Survey	NA	NA	88	NA	NA	91	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.

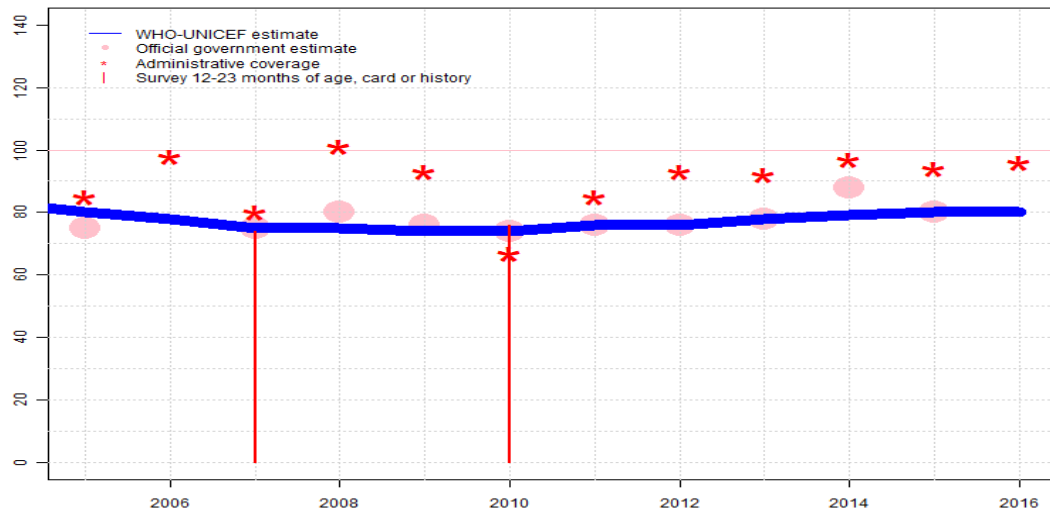
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2016: Estimate based on extrapolation from data reported by national government. Reported data excluded because 103 percent greater than 100 percent. Reported data excluded due to unexplained sudden change in coverage from 90 level to 103 percent. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on interpolation between data reported by national government. Reported data excluded. Inconsistent and unexplained adjustment of official coverage from administrative data. Programme reports a decrease in the national target population for 2014 compared to 2013. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Reported data excluded due to decline in reported coverage from 90 percent to 77 percent with increase to 91 percent. National official estimates are based on projection from 2008 MICS survey results. GoC=R+ S+ D+
- 2009: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: R-
- 2008: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: R-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). GoC=R+ S+ D+
- 2006: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Reported data excluded because 109 percent greater than 100 percent. Reported data excluded due to an unexplained increase from 85 percent to 109 percent with decrease 85 percent. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Estimate challenged by: R-

# Mozambique - DTP3

MOZ - DTP3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	80	78	75	75	74	74	76	76	78	79	80	80
Estimate GoC	•	•	•••	•	•	•	•••	•	•	•	•	•
Official	75	NA	75	80	76	74	76	76	78	88	80	NA
Administrative	85	98	80	101	93	67	85	93	92	97	94	96
Survey	NA	NA	74	NA	NA	76	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.

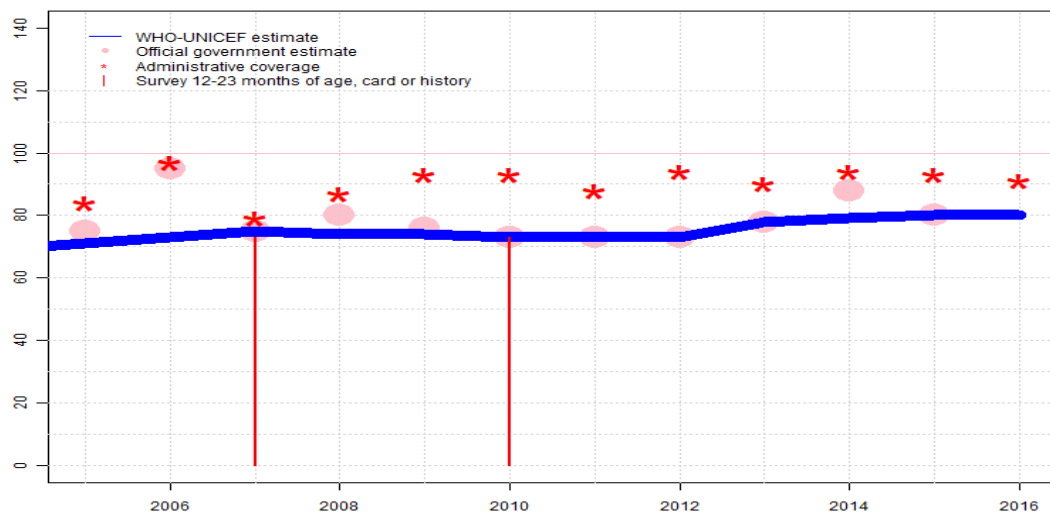
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2016: Estimate based on extrapolation from data reported by national government. Reported data excluded due to unexplained sudden change in coverage from 80 level to 96 percent. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on interpolation between data reported by national government. Reported data excluded. Inconsistent and unexplained adjustment of official coverage from administrative data. Programme reports a decrease in the national target population for 2014 compared to 2013. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 78 percent based on 1 survey(s). Mozambique Demographics and Health Survey 2011 card or history results of 76 percent modified for recall bias to 78 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 80 percent and 3d dose card only coverage of 69 percent. National official estimates are based on projection from 2008 MICS survey results. Estimate challenged by: D-
- 2009: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: D-R-
- 2008: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: R-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 79 percent based on 1 survey(s). Mozambique Multiple Indicator Cluster Survey 2008 card or history results of 74 percent modified for recall bias to 79 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 79 percent and 3d dose card only coverage of 71 percent. GoC=R+ S+ D+
- 2006: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Reported data excluded due to an unexplained increase from 75 percent to 98 percent with decrease 75 percent. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Estimate challenged by: R-

# Mozambique - Pol3

MOZ - Pol3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	71	73	75	74	74	73	73	73	78	79	80	80
Estimate GoC	•	•	•••	•	•	•	•	•	•	•	•	•
Official	75	95	75	80	76	73	73	73	78	88	80	NA
Administrative	84	97	79	87	93	93	88	94	90	94	93	91
Survey	NA	NA	73	NA	NA	73	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.

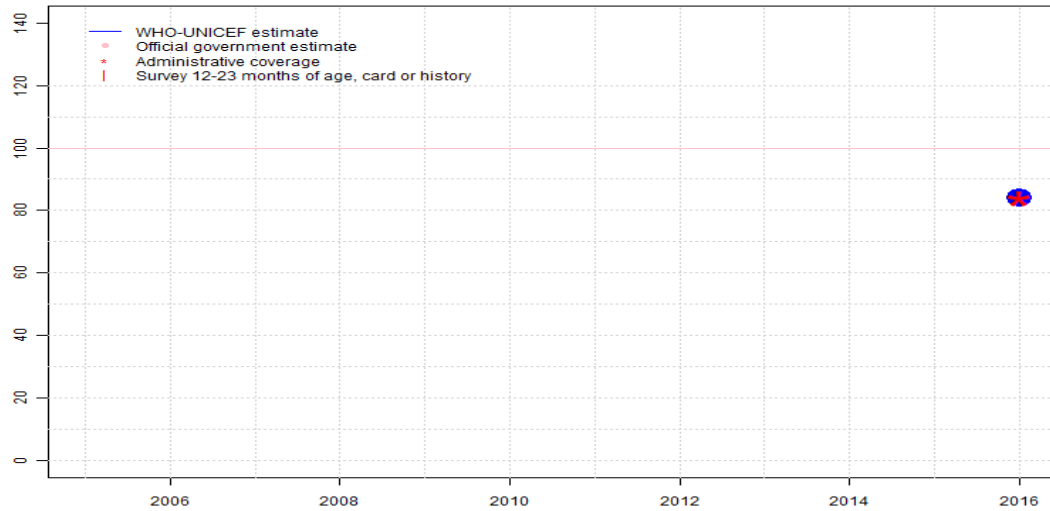
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2016: Estimate based on extrapolation from data reported by national government. Reported data excluded due to unexplained sudden change in coverage from 80 level to 91 percent. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on interpolation between data reported by national government. Reported data excluded. Inconsistent and unexplained adjustment of official coverage from administrative data. Programme reports a decrease in the national target population for 2014 compared to 2013. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 82 percent based on 1 survey(s). Mozambique Demographics and Health Survey 2011 card or history results of 73 percent modified for recall bias to 82 percent based on 1st dose card or history coverage of 92 percent, 1st dose card only coverage of 80 percent and 3d dose card only coverage of 71 percent. National official estimates are based on projection from 2008 MICS survey results. Estimate challenged by: D-
- 2009: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: D-R-
- 2008: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: R-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 78 percent based on 1 survey(s). Mozambique Multiple Indicator Cluster Survey 2008 card or history results of 73 percent modified for recall bias to 78 percent based on 1st dose card or history coverage of 87 percent, 1st dose card only coverage of 79 percent and 3d dose card only coverage of 71 percent. GoC=R+ S+ D+
- 2006: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Reported data excluded due to an unexplained increase from 75 percent to 95 percent with decrease 75 percent. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Estimate challenged by: R-

# Mozambique - IPV1

MOZ - IPV1



## Description:

2016: Estimate based on reported administrative estimate. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. IPV vaccine introduced in 2015. Reporting started in 2016. GoC=R+ D+

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	84
Estimate GoC	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	84
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

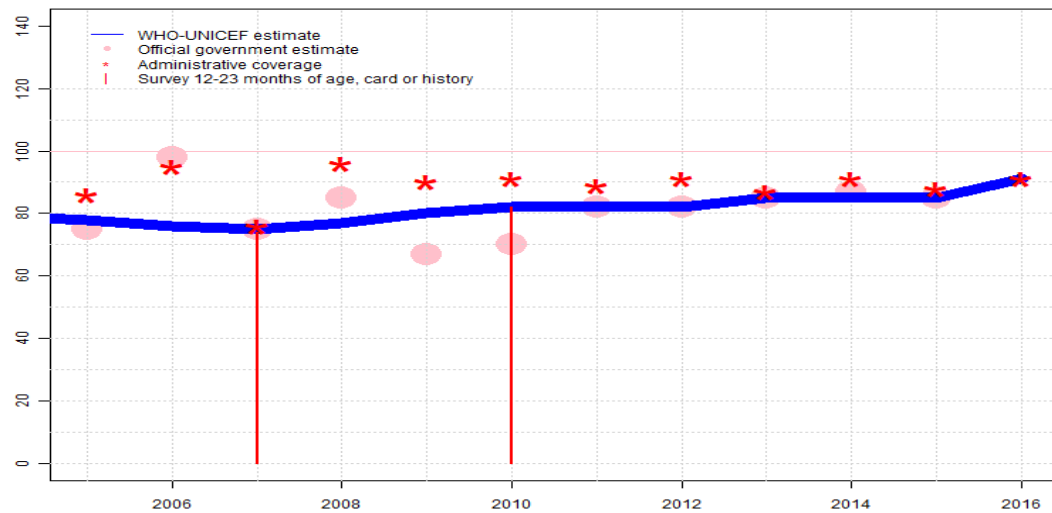
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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.

# Mozambique - MCV1

MOZ - MCV1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	78	76	75	77	80	82	82	82	85	85	85	91
Estimate GoC	•	•	•••	•	•	•	•••	•••	••	••	••	••
Official	75	98	75	85	67	70	82	82	85	87	85	NA
Administrative	86	95	76	96	90	91	89	91	87	91	88	91
Survey	NA	NA	74	NA	NA	82	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.

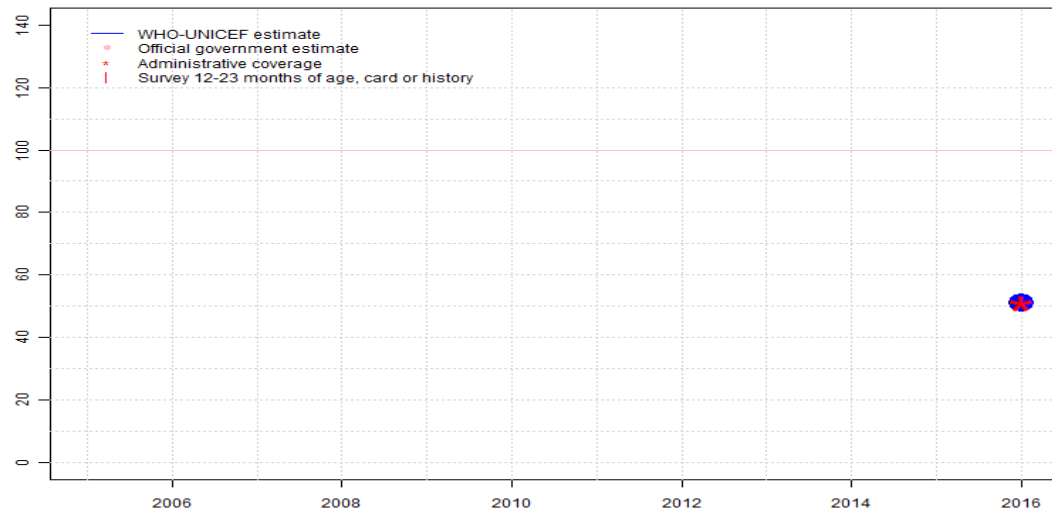
## Description:

- 2016: Estimate based on reported administrative data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. GoC=R+ D+
- 2014: Estimate based on interpolation between data reported by national government. Reported data excluded. Inconsistent and unexplained adjustment of official coverage from administrative data. Programme reports a decrease in the national target population for 2014 compared to 2013. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2011: Estimate based on reported data. GoC=R+ S+ D+
- 2010: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 82 percent based on 1 survey(s). National official estimates are based on projection from 2008 MICS survey results. Estimate challenged by: R-
- 2009: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: R-
- 2008: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: R-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 74 percent based on 1 survey(s). GoC=R+ S+ D+
- 2006: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Reported data excluded due to an unexplained increase from 75 percent to 98 percent with decrease 75 percent. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 2003 and 2007 levels. Reported data vary widely. Estimate challenged by: R-



# Mozambique - MCV2

MOZ - MCV2



## Description:

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

2016: Estimate based on reported administrative estimate. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Second dose of measles vaccine was introduced in November 2015 reporting started in 2016. GoC=R+ D+

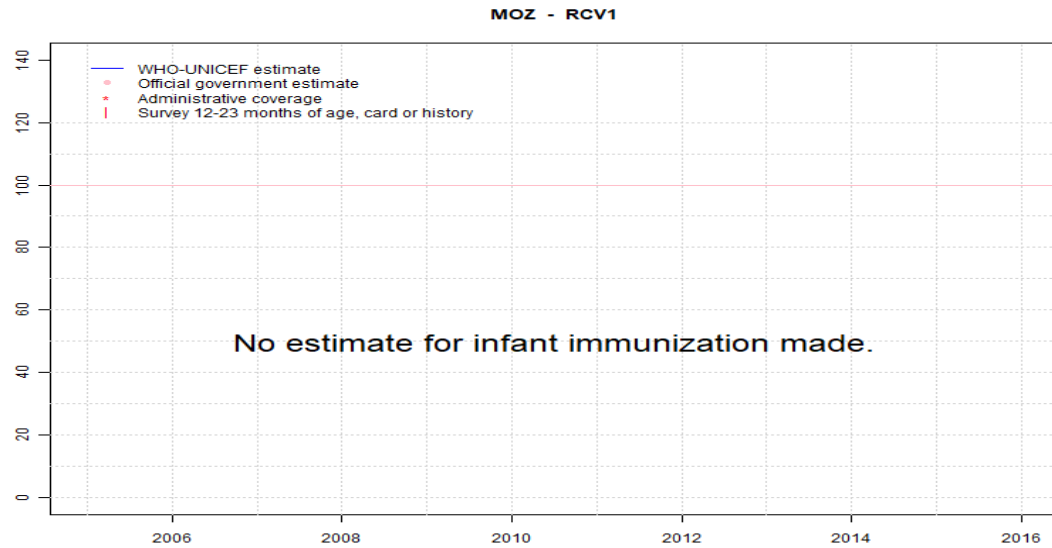
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	51
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	51
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

# Mozambique - RCV1



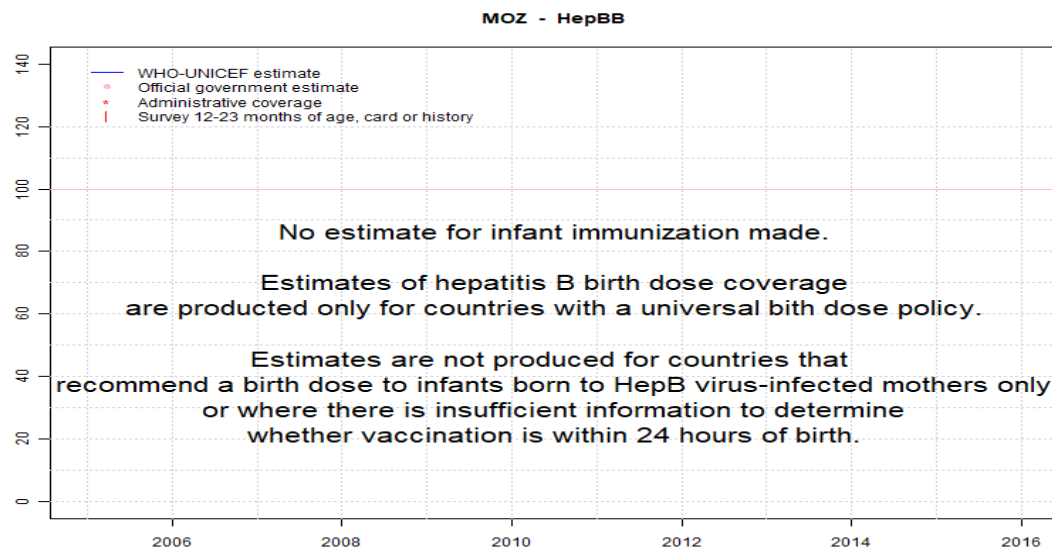
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

# Mozambique - 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

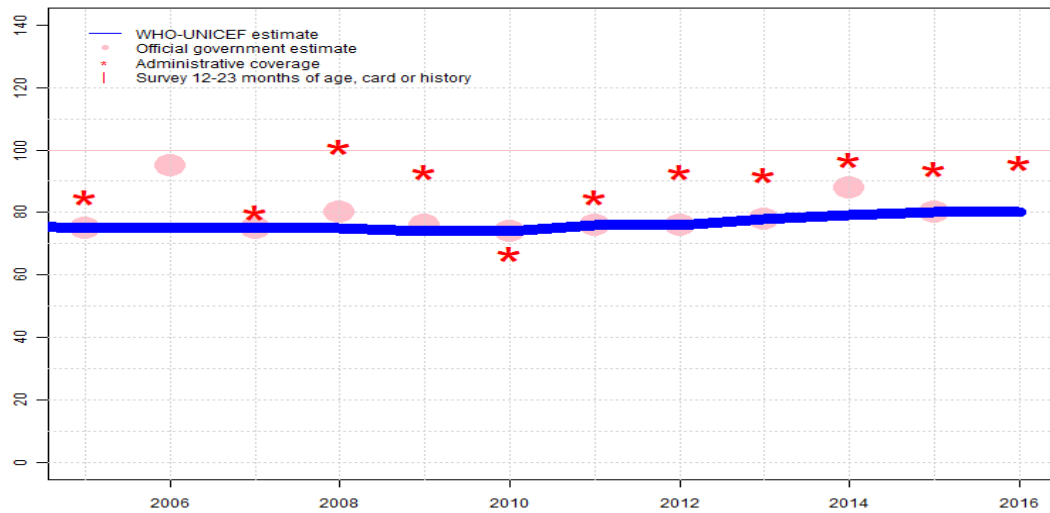
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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.

# Mozambique - HepB3

MOZ - HepB3



## Description:

- 2016: Estimate based on extrapolation from data reported by national government. Reported data excluded. Unexplained increase from 2015. Reported data excluded due to unexplained sudden change in coverage from 80 level to 96 percent. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on interpolation between data reported by national government. Reported data excluded. Inconsistent and unexplained adjustment of official coverage from administrative data. Programme reports a decrease in the national target population for 2014 compared to 2013. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Government official estimates are based on data provided by MICS 2008. National official estimates are based on projection from 2008 MICS survey results. Estimate challenged by: D-
- 2009: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: D-R-
- 2008: Estimate based on interpolation between 2007 and 2010 levels. Reported data vary widely. Estimate challenged by: R-
- 2007: Estimate based on survey results. GoC=R+ D+
- 2006: Estimate based on interpolation between 2002 and 2007 levels. Reported data vary widely. Reported data excluded due to an unexplained increase from 75 percent to 95 percent with decrease 75 percent. Estimate challenged by: D-R-
- 2005: Estimate based on interpolation between 2002 and 2007 levels. Reported data vary widely. Estimate challenged by: R-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	75	75	75	75	74	74	76	76	78	79	80	80
Estimate GoC	•	•	••	•	•	•	••	•	•	•	•	•
Official	75	95	75	80	76	74	76	76	78	88	80	NA
Administrative	85	NA	80	101	93	67	85	93	92	97	94	96
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

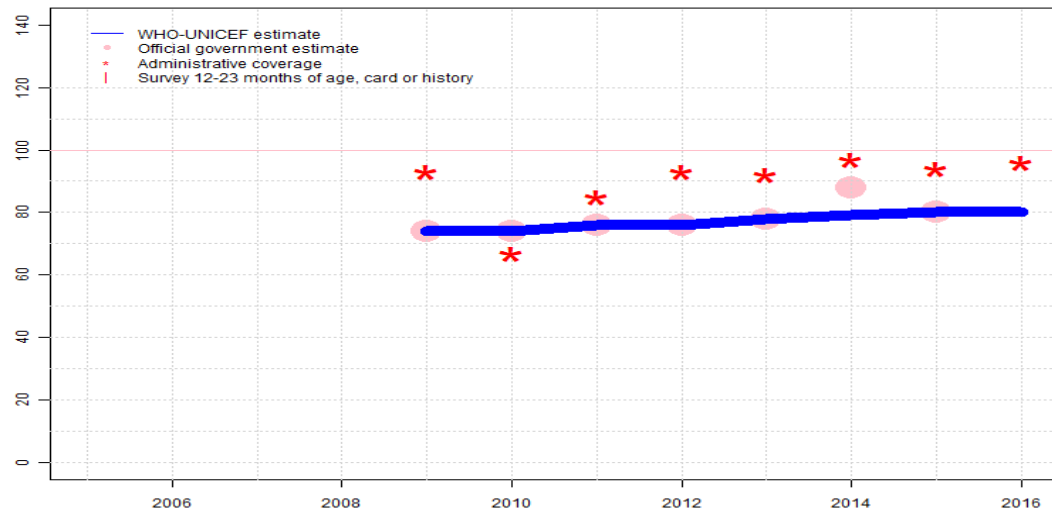
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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.

# Mozambique - Hib3

MOZ - Hib3



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	74	74	76	76	78	79	80	80
Estimate GoC	NA	NA	NA	NA	•	•	••	•	•	•	•	•
Official	NA	NA	NA	NA	74	74	76	76	78	88	80	NA
Administrative	NA	NA	NA	NA	93	67	85	93	92	97	94	96
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.

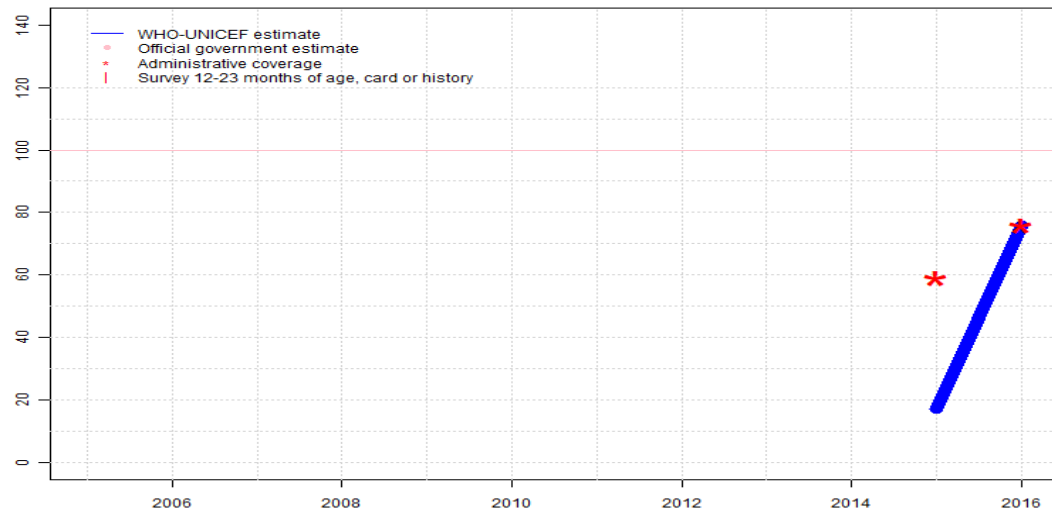
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2016: Estimate based on extrapolation from data reported by national government. Reported data excluded. Unexplained increase from 2015. Reported data excluded due to unexplained sudden change in coverage from 80 level to 96 percent. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on interpolation between data reported by national government. Reported data excluded. Inconsistent and unexplained adjustment of official coverage from administrative data. Programme reports a decrease in the national target population for 2014 compared to 2013. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Government official estimates are based on data provided by MICS 2008. National official estimates are based on projection from 2008 MICS survey results. Estimate challenged by: D-
- 2009: Estimate based on reported data. Hib vaccine introduced in 2009 Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: D-

# Mozambique - RotaC

MOZ - RotaC



## Description:

- 2016: Estimate based on reported administrative estimate. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Increase in coverage due to national roll out. GoC=R+ D+
- 2015: Rotavirus vaccine was introduced in September 2015. Programme reports 88 percent coverage in 29 percent of the national target population. Estimate is based on total annual national target population. Estimate challenged by: R-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17	76
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	59	76
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

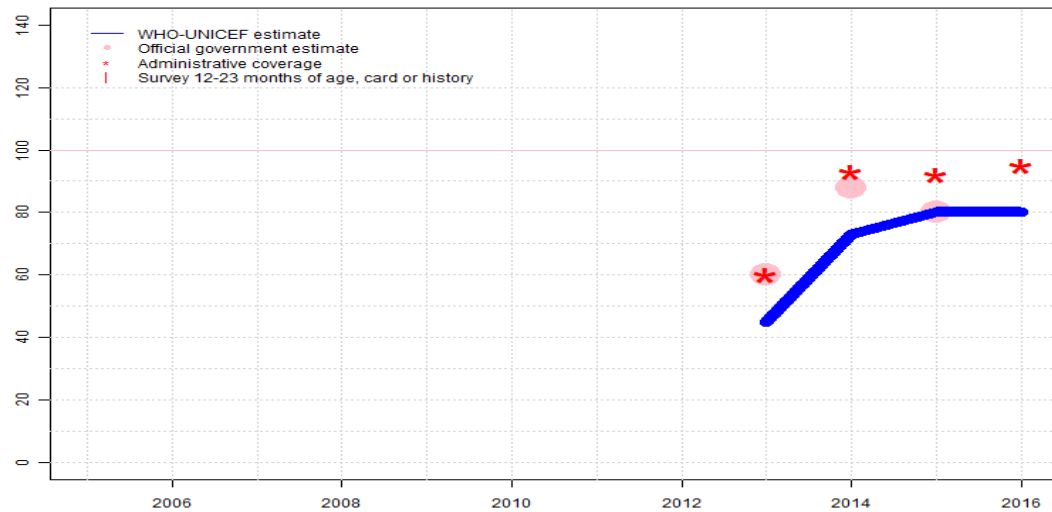
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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.

# Mozambique - PcV3

MOZ - PcV3



## Description:

- 2016: Estimate of 80 percent assigned by working group. PcV3 coverage based on estimated DTP3 coverage. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-R-
- 2015: Estimate is based on reported data. Estimate challenged by: D-
- 2014: Estimate of 73 percent assigned by working group. Estimate is based on relationship between DTP3 and PcV3 administrative coverage levels and the adjustment on estimate for DTP3. Reported data excluded. Inconsistent and unexplained adjustment of official coverage from administrative data. Programme reports a decrease in the national target population for 2014 compared to 2013. Estimate challenged by: D-R-
- 2013: Forty five percent coverage was achieved in 67 percent of target population. Pneumococcal conjugate vaccine introduced in April. Estimate challenged by: R-

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	45	73	80	80
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	60	88	80	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	60	93	92	95
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.

# Mozambique - survey details

## 2010 Moçambique Inquérito Demográfico e de Saúde 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	90	12-23 m	2325	83
BCG	Card	80	12-23 m	1931	83
BCG	Card or History	91	12-23 m	2325	83
BCG	History	12	12-23 m	394	83
DTP1	C or H <12 months	90	12-23 m	2325	83
DTP1	Card	80	12-23 m	1931	83
DTP1	Card or History	91	12-23 m	2325	83
DTP1	History	12	12-23 m	394	83
DTP3	C or H <12 months	71	12-23 m	2325	83
DTP3	Card	69	12-23 m	1931	83
DTP3	Card or History	76	12-23 m	2325	83
DTP3	History	7	12-23 m	394	83
MCV1	C or H <12 months	66	12-23 m	2325	83
MCV1	Card	70	12-23 m	1931	83
MCV1	Card or History	82	12-23 m	2325	83
MCV1	History	11	12-23 m	394	83
Pol1	C or H <12 months	90	12-23 m	2325	83
Pol1	Card	80	12-23 m	1931	83
Pol1	Card or History	92	12-23 m	2325	83
Pol1	History	12	12-23 m	394	83
Pol3	C or H <12 months	68	12-23 m	2325	83
Pol3	Card	71	12-23 m	1931	83
Pol3	Card or History	73	12-23 m	2325	83
Pol3	History	2	12-23 m	394	83

## 2007 Mozambique Multiple Indicator Cluster Survey 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	87	12-23 m	2449	85
BCG	Card	78	12-23 m	2449	85
BCG	Card or History	88	12-23 m	2449	85
BCG	History	9	12-23 m	2449	85
DTP1	C or H <12 months	87	12-23 m	2449	85
DTP1	Card	79	12-23 m	2449	85
DTP1	Card or History	88	12-23 m	2449	85

DTP1	History	9	12-23 m	2449	85
DTP3	C or H <12 months	70	12-23 m	2449	85
DTP3	Card	71	12-23 m	2449	85
DTP3	Card or History	74	12-23 m	2449	85
DTP3	History	3	12-23 m	2449	85
MCV1	C or H <12 months	64	12-23 m	2449	85
MCV1	Card	66	12-23 m	2449	85
MCV1	Card or History	74	12-23 m	2449	85
MCV1	History	8	12-23 m	2449	85
Pol1	C or H <12 months	86	12-23 m	2449	85
Pol1	Card	79	12-23 m	2449	85
Pol1	Card or History	87	12-23 m	2449	85
Pol1	History	8	12-23 m	2449	85
Pol3	C or H <12 months	70	12-23 m	2449	85
Pol3	Card	71	12-23 m	2449	85
Pol3	Card or History	73	12-23 m	2449	85
Pol3	History	2	12-23 m	2449	85

## 2003 Inquérito Demográfico e de Saúde 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	86	12-23 m	1933	78
BCG	Card	75	12-23 m	1933	78
BCG	Card or history	87	12-23 m	1933	78
BCG	History	13	12-23 m	1933	78
DTP1	C or H <12 months	85	12-23 m	1933	78
DTP1	Card	76	12-23 m	1933	78
DTP1	Card or history	88	12-23 m	1933	78
DTP1	History	12	12-23 m	1933	78
DTP3	C or H <12 months	67	12-23 m	1933	78
DTP3	Card	66	12-23 m	1933	78
DTP3	Card or history	72	12-23 m	1933	78
DTP3	History	6	12-23 m	1933	78
MCV1	C or H <12 months	63	12-23 m	1933	78
MCV1	Card	66	12-23 m	1933	78
MCV1	Card or history	77	12-23 m	1933	78
MCV1	History	11	12-23 m	1933	78
Pol1	C or H <12 months	85	12-23 m	1933	78
Pol1	Card	76	12-23 m	1933	78



# Mozambique - survey details

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Pol1	Card or history	87	12-23 m	1933	78	Pol3	Card or history	70	12-23 m	1933	78
Pol1	History	11	12-23 m	1933	78	Pol3	History	4	12-23 m	1933	78
Pol3	C or H <12 months	65	12-23 m	1933	78						
Pol3	Card	66	12-23 m	1933	78						

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](http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html)