Tunisia: WHO and UNICEF estimates of immunization coverage: 2020 revision

BCG · **DTP1** · **DTP3** · **Pol3** · **MCV1** · **HepB3** · **Hib3** · **RotaC** · **PcV3**

No estimate for infant immunization made.

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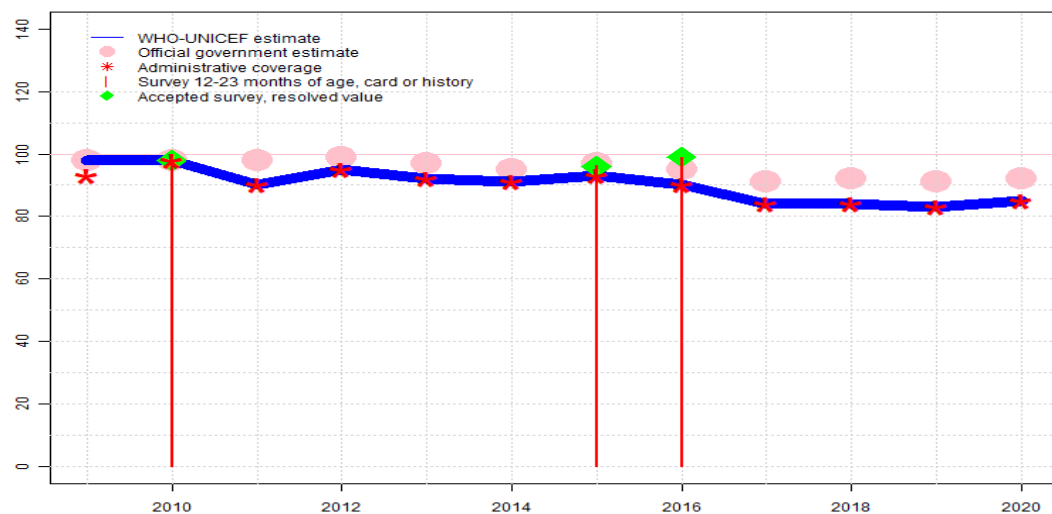
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

Tunisia - BCG

TUN - BCG

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	98	98	90	95	92	91	93	90	84	84	83	85
Estimate GoC	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	••	••
Official	98	98	98	99	97	95	97	95	91	92	91	92
Administrative	93	98	90	95	92	91	93	90	84	84	83	85
Survey	NA	98.2	NA	NA	NA	NA	96.3	98.9	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: 2020 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:

2020: Estimate based on reported administrative data. Programme reports vaccine stock-outs of one month at the subnational level. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2019: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. Estimate of 83 percent changed from previous revision value of 92 percent. GoC=Assigned by working group. Consistency with other antigens.

2018: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. Estimate of 84 percent changed from previous revision value of 93 percent. GoC=Assigned by working group. Consistency with other antigens.

2017: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate of 84 percent changed from previous revision value of 93 percent. GoC=Assigned by working group. Consistency with other antigens.

2016: Estimate is based on administrative coverage as it is accepted for all other antigens. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate of 90 percent changed from previous revision value of 99 percent. GoC=Assigned by working group. Consistency with other antigens.

2015: Estimate is based on administrative coverage as it is accepted for all other antigens. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate of 93 percent changed from previous revision value of 96 percent. GoC=R+ S+ D+

2014: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate of 91 percent changed from previous revision value of 93 percent. GoC=R+ S+ D+

2013: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate of 92 percent changed from previous revision value of 94 percent. GoC=R+ S+ D+

2012: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate of 95 percent changed from previous revision

value of 96 percent. GoC=R+ S+ D+

2011: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate of 90 percent changed from previous revision value of 91 percent. GoC=R+ S+ D+

2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). National programme challenges the results of the 2011-12 MICS survey, reflecting coverage for the 2010 birth cohort. GoC=R+ S+ D+

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

Tunisia - DTP1

TUN - DTP1

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	99	98	99	97	96	95	93	93	92	93	94	92
Estimate GoC	●●●	●●●	●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●	●
Official	99	98	98	99	99	98	98	96	96	98	98	94
Administrative	98	98	96	97	96	95	93	91	89	91	92	90
Survey	NA	99.3	NA	NA	NA	NA	93.5	95.9	NA	NA	NA	NA

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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
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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.
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●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2020 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.

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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.
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Description:

2020: Reported data calibrated to 2016 levels. Programme reports vaccine stock-outs of one month at the national and subnational levels. Adjustments incorporated into the official coverage tend to differ across antigens and over time. Estimate challenged by: R-

2019: Reported data calibrated to 2016 levels. Adjustments incorporated into the official coverage tend to differ across antigens and over time. Estimate of 94 percent changed from previous revision value of 97 percent. GoC=Assigned by working group. Consistency with other antigens.

2018: Reported data calibrated to 2016 levels. Adjustments incorporated into the official coverage tend to differ across antigens and over time. Estimate of 93 percent changed from previous revision value of 96 percent. GoC=Assigned by working group. Consistency with other antigens.

2017: Estimate is based on estimated DTP3 level and no dropout as administrative coverage is accepted for all other antigens. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate of 92 percent changed from previous revision value of 94 percent. GoC=Assigned by working group. Consistency with other antigens.

2016: Estimate of 93 percent assigned by working group. Estimate is based on estimated DTP3 level and no dropout as administrative coverage is accepted for all other antigens. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate of 93 percent changed from previous revision value of 96 percent. GoC=Assigned by working group. Consistency with other antigens.

2015: Estimate is based on estimated DTP3 level and no dropout as administrative coverage is accepted for all other antigens. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+
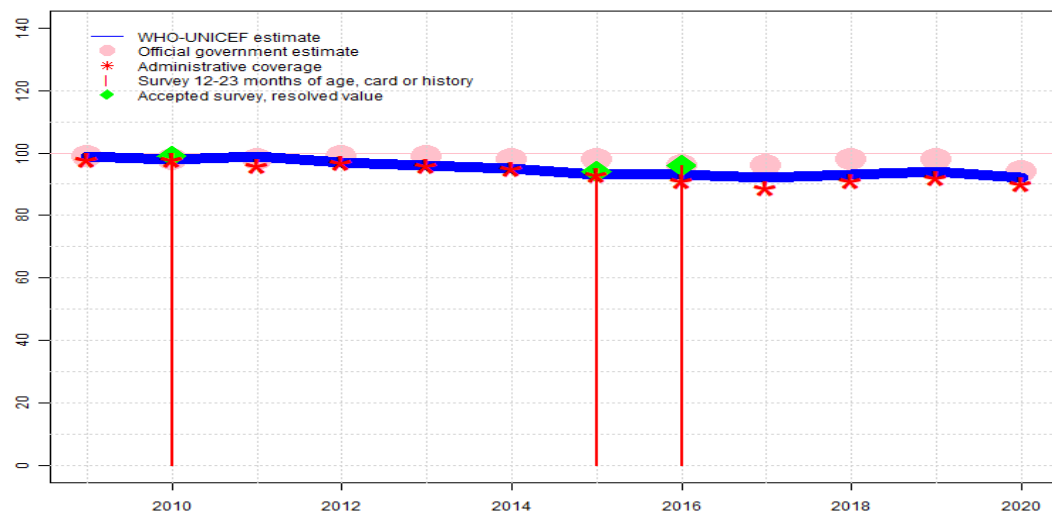
2014: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2013: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

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2011: DTP1 coverage estimated based on DTP3 coverage of 98. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate challenged by: R-

2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 99 percent based on 1 survey(s). National programme challenges the results of the 2011-12 MICS survey, reflecting coverage for the 2010 birth cohort. GoC=R+ S+ D+

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

Tunisia - DTP3

TUN - DTP3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	99	98	98	95	95	94	93	93	92	90	92	92
Estimate GoC	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	••	••
Official	99	98	98	97	98	98	98	98	98	97	98	97
Administrative	99	98	98	95	95	94	93	93	92	90	92	92
Survey	NA	95.9	NA	NA	NA	NA	82.5	85.1	NA	NA	NA	NA

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2018: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ S+ D+

2017: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+
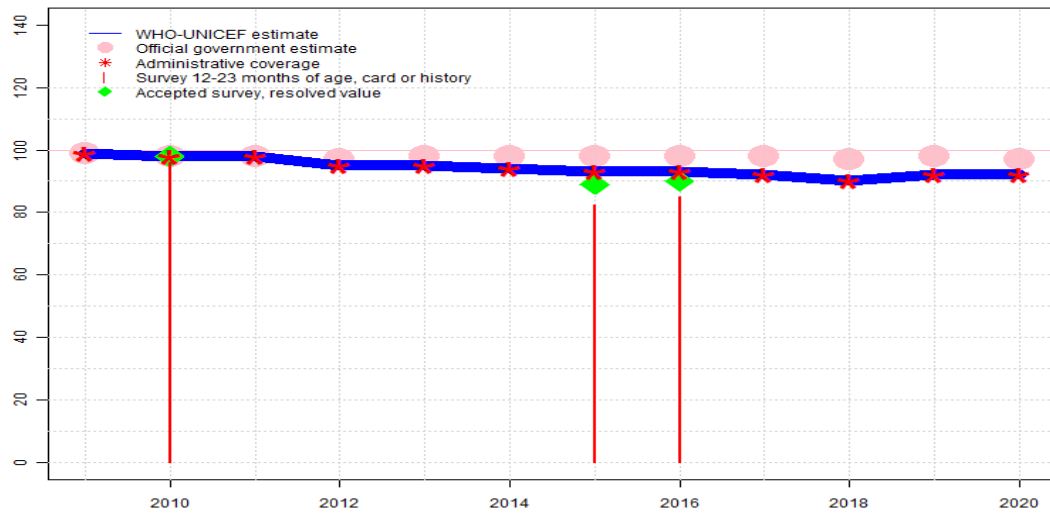
2016: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey 2018 card or history results of 85 percent modifed for recall bias to 90 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 85 percent and 3rd dose card only coverage of 80 percent. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2015: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey 2018 card or history results of 83 percent modifed for recall bias to 89 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 77 percent and 3rd dose card only coverage of 74 percent. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

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2011: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016

cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey (MICS4) – 2011-12 card or history results of 96 percent modifed for recall bias to 98 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 84 percent and 3rd dose card only coverage of 83 percent. National programme challenges the results of the 2011-12 MICS survey, reflecting coverage for the 2010 birth cohort. GoC=R+ S+ D+

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

Tunisia - Pol3

TUN - Pol3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	99	98	98	95	95	94	93	93	92	90	92	92
Estimate GoC	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●	●●
Official	99	98	98	97	98	98	98	98	98	97	98	97
Administrative	99	98	98	95	95	94	93	93	92	90	92	92
Survey	NA	93.8	NA	NA	NA	NA	80.6	81.6	NA	NA	NA	NA

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2017: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2016: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey 2018 card or history results of 82 percent modifed for recall bias to 89 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 84 percent and 3rd dose card only coverage of 78 percent. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2015: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey 2018 card or history results of 81 percent modifed for recall bias to 91 percent based on 1st dose card or history coverage of 93 percent, 1st dose card only coverage of 76 percent and 3rd dose card only coverage of 74 percent. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2014: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2013: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2012: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2011: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do

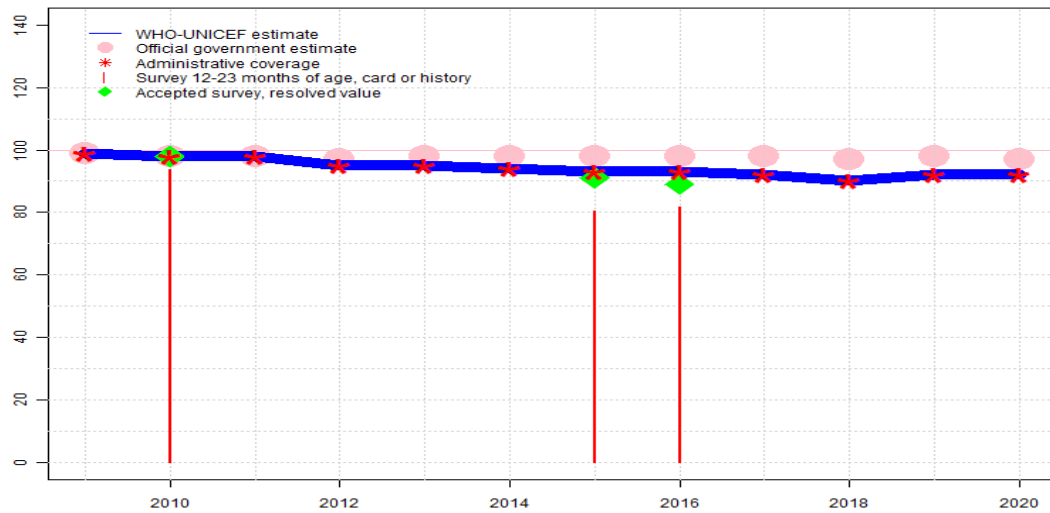not always support this adjustment. GoC=R+ S+ D+

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

Tunisia - IPV1

TUN - IPV1

- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	93	93	89	91	92	90
Estimate GoC	NA	NA	NA	NA	NA	NA	●●	●●	●●	●●	●●	●●
Official	NA	NA	NA	NA	NA	NA	98	98	96	98	98	94
Administrative	NA	NA	NA	NA	NA	NA	93	93	89	91	92	90
Survey	NA	NA	NA	NA	NA	NA	69.9	67.2	NA	NA	NA	NA

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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:

Estimates for a dose of inactivated polio vaccine (IPV) begin in 2015 following the Global Polio Eradication Initiative's Polio Eradication and Endgame Strategic Plan: 2013-2018 which recommended at least one full dose or two fractional doses of IPV into routine immunization schedules as a strategy to mitigate the potential consequences should any re-emergence of type 2 poliovirus occur following the planned withdrawal of Sabin type 2 strains from oral polio vaccine (OPV).

2020: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2019: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2018: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2017: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+
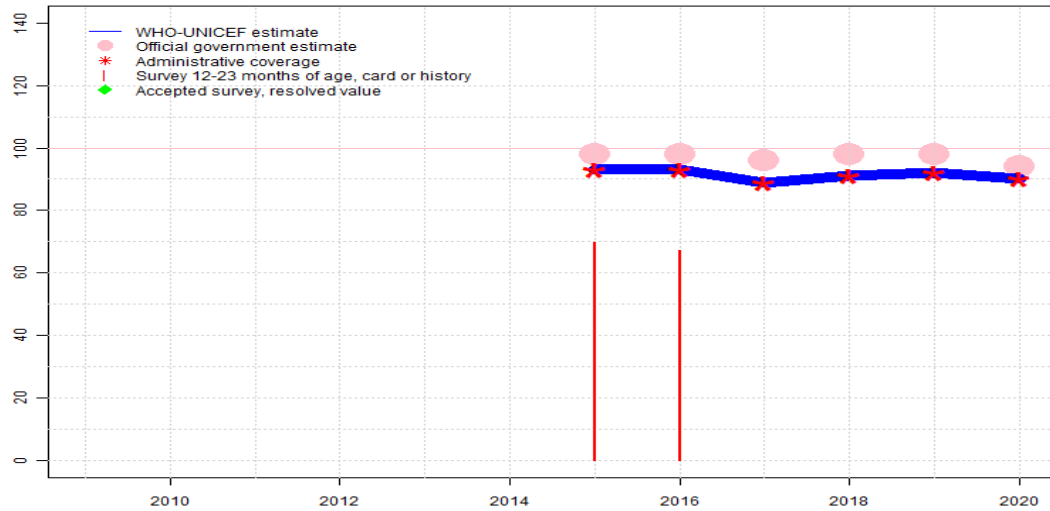
2016: Estimate based on reported administrative estimate. Tunisia Multiple Indicator Cluster Survey 2018 results ignored by working group. In contrast to other antigens, survey results are inconsistent with reported data, likely due to the timing of the survey fieldwork during vaccine introduction. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2015: Estimate based on reported administrative estimate. Tunisia Multiple Indicator Cluster Survey 2018 results ignored by working group. In contrast to other antigens, survey results are inconsistent with reported data, likely due to the timing of the survey fieldwork during vaccine introduction. Inactivated polio vaccine in September 2014. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

Tunisia - MCV1

TUN - MCV1

- —— WHO-UNICEF estimate
- ● Official government estimate
- ＊ Administrative coverage
- | Survey 12-23 months of age, card or history
- ◆ Accepted survey, resolved value

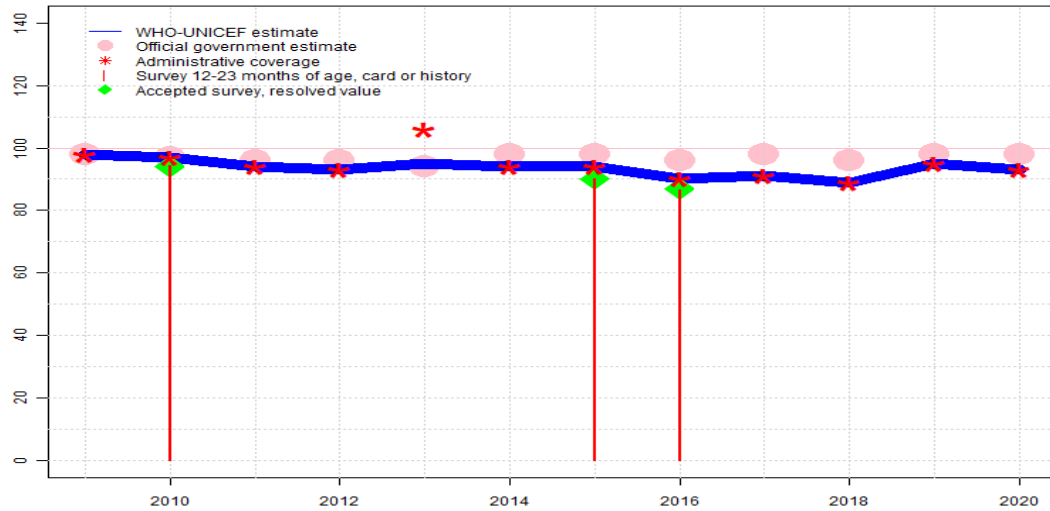|	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	98	97	94	93	95	94	94	90	91	89	95	93
Estimate GoC	●●●	●●●	●●●	●●●	●	●●●	●●●	●●●	●●●	●●●	●●	●●
Official	98	97	96	96	94	98	98	96	98	96	98	98
Administrative	98	97	94	93	106	94	94	90	91	89	95	93
Survey	NA	94.3	NA	NA	NA	NA	90.3	86.7	NA	NA	NA	NA

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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.
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●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2020 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.

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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.
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Description:

2020: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2019: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2018: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ S+ D+

2017: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2016: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2015: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2014: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2013: Estimate based on interpolation between 2010 and 2015 levels. . Reported data excluded because 106 percent greater than 100 percent. Reported data excluded due to an increase from 93 percent to 106 percent with decrease 94 percent. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate challenged by: D-R-

2012: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2011: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). National programme challenges the results of the 2011-12 MICS survey, reflecting coverage for the 2010 birth cohort. GoC=R+ S+

D+

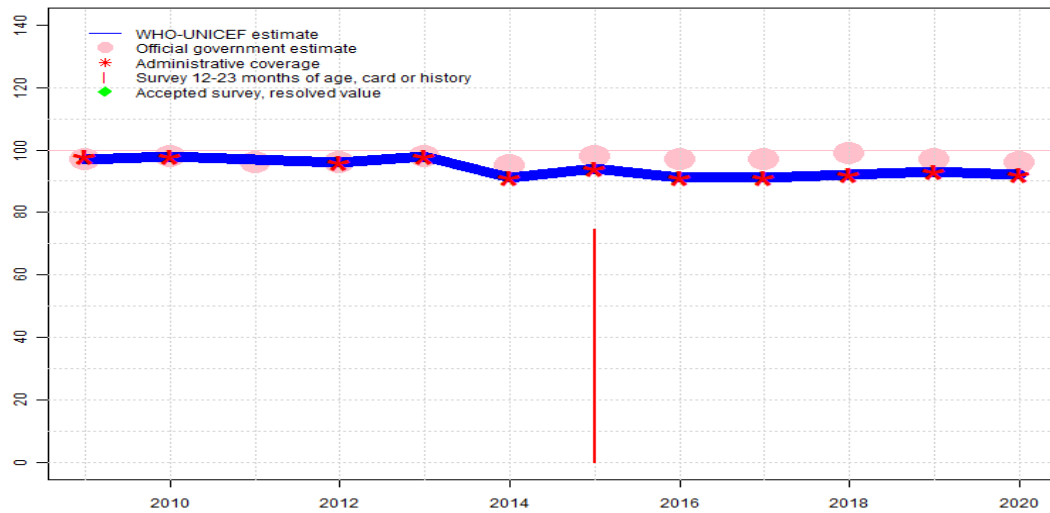2009: Estimate based on coverage reported by national government. GoC=R+ S+ D+

Tunisia - MCV2

TUN - MCV2

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	97	98	97	96	98	91	94	91	91	92	93	92
Estimate GoC	●●	●●	●	●	●	●●	●●	●●	●●	●●	●●	●●
Official	97	98	96	96	98	95	98	97	97	99	97	96
Administrative	98	98	NA	96	98	91	94	91	91	92	93	92
Survey	NA	NA	NA	NA	NA	NA	74.5	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: 2020 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.

2020: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2019: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2018: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2017: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2016: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2015: Estimate based on reported administrative estimate. Tunisia Multiple Indicator Cluster Survey 2018 results ignored by working group. In contrast to other antigens, survey results are inconsistent with reported data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2014: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2013: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate challenged by: D-

2012: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate challenged by: D-

2011: Estimate based on interpolation between reported values. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=No accepted empirical data

2010: Estimate based on coverage reported by national government. National programme challenges the results of the 2011-12 MICS survey, reflecting coverage for the 2010 birth

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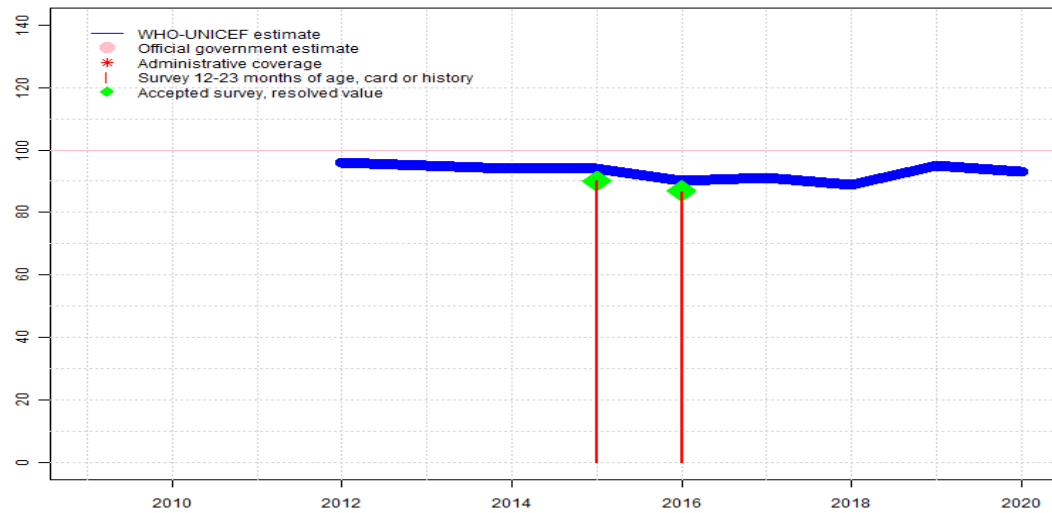
2009: Estimate based on coverage reported by national government. GoC=R+ D+

WHO and UNICEF estimates of national immunization coverage - next revision available July 15, 2022 data received as of July 6, 2021

TUN - RCV1

Legend:
- — WHO-UNICEF estimate
- ● Official government estimate
- ✳ Administrative coverage
- | Survey 12-23 months of age, card or history
- ◆ Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	96	95	94	94	90	91	89	95	93
Estimate GoC	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	90.3	86.7	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: 2020 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.
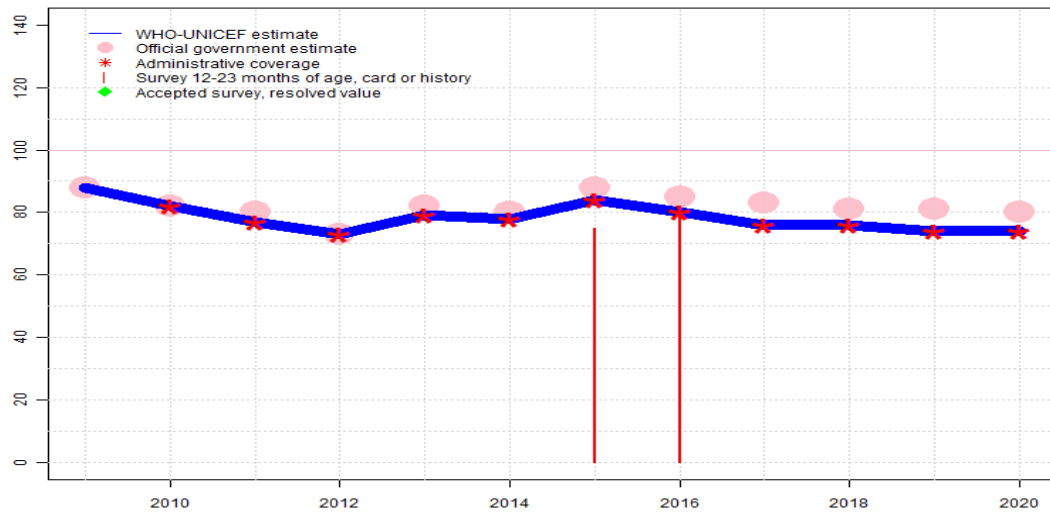
Description:

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.

2020: Estimate based on estimated MCV1. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2019: Estimate based on estimated MCV1. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2018: Estimate based on estimated MCV1. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ S+ D+

2017: Estimate based on estimated MCV1. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2016: Estimate based on estimated MCV1. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2015: Estimate based on estimated MCV1. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2014: Estimate based on estimated MCV1. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2013: Estimate based on estimated MCV1. Recommended age of administration changed to 12 months of age. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate challenged by: D-R-

2012: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate Rubella containing vaccine re-introduced in 2012 and recommended at six years of age. Between 2004-2011 RCV recommended for girls aged 12 years. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. Estimate challenged by: D-

Tunisia - HepBB

TUN - HepBB

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	88	82	77	73	79	78	84	80	76	76	74	74
Estimate GoC	••	••	••	••	••	••	••	••	••	••	••	••
Official	88	82	80	73	82	80	88	85	83	81	81	80
Administrative	NA	82	77	73	79	78	84	80	76	76	74	74
Survey	NA	NA	NA	NA	NA	NA	75.1	80.5	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: 2020 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:

2020: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2019: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2018: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2017: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2016: Estimate based on reported administrative estimate. Tunisia Multiple Indicator Cluster Survey 2018 results ignored by working group. In contrast to other antigens, survey results are inconsistent with reported data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2015: Estimate based on reported administrative estimate. Tunisia Multiple Indicator Cluster Survey 2018 results ignored by working group. In contrast to other antigens, survey results are inconsistent with reported data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2014: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+

2013: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2012: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2011: Estimate based on reported administrative estimate. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2010: Estimate based on coverage reported by national government. National programme challenges the results of the 2011-12 MICS survey, reflecting coverage for the 2010 birth cohort. GoC=R+ D+
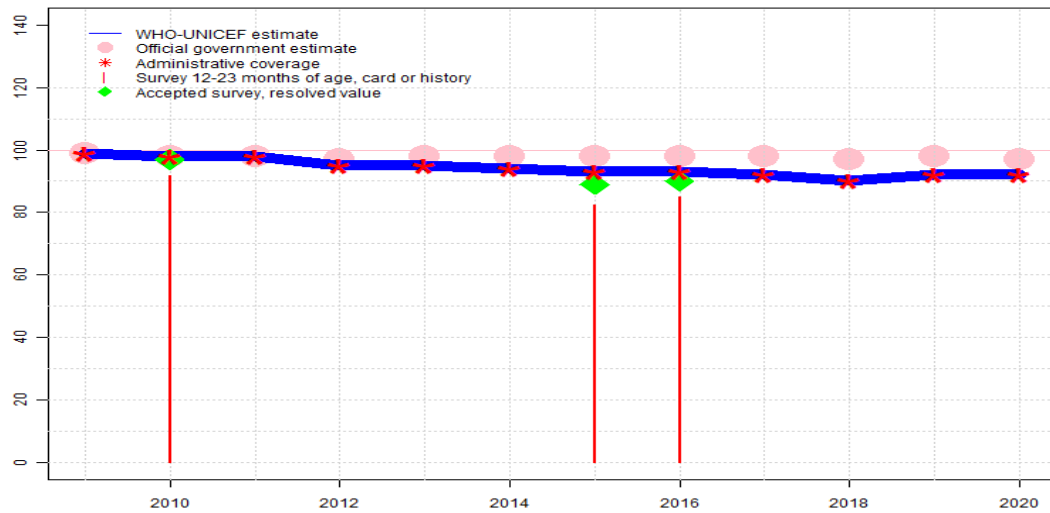
2009: Estimate based on coverage reported by national government. GoC=R+

Tunisia - HepB3

TUN - HepB3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	99	98	98	95	95	94	93	93	92	90	92	92
Estimate GoC	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	••	••
Official	99	98	98	97	98	98	98	98	98	97	98	97
Administrative	99	98	98	95	95	94	93	93	92	90	92	92
Survey	NA	91.9	NA	NA	NA	NA	82.5	85.1	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: 2020 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:

2020: Estimate based on reported administrative data. Programme reports vaccine stock-outs of one month at the national and subnational levels. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2019: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2018: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ S+ D+

2017: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2016: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey 2018 card or history results of 85 percent modifed for recall bias to 90 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 85 percent and 3rd dose card only coverage of 80 percent. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2015: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey 2018 card or history results of 83 percent modifed for recall bias to 89 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 77 percent and 3rd dose card only coverage of 74 percent. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2014: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2013: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2012: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2011: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016

cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey (MICS4) – 2011-12 card or history results of 92 percent modifed for recall bias to 97 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 84 percent and 3rd dose card only coverage of 83 percent. National programme challenges the results of the 2011-12 MICS survey, reflecting coverage for the 2010 birth cohort. GoC=R+ S+ D+

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

TUN - Hib3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	43	95	95	94	93	93	92	90	92	92
Estimate GoC	NA	NA	●●	●●	●●●	●●●	●●●	●●●	●●●	●●●	●●	●●
Official	NA	NA	43	97	98	98	98	98	98	97	98	97
Administrative	NA	NA	43	95	95	94	93	93	92	90	92	92
Survey	NA	NA	NA	NA	NA	NA	82.5	85.1	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: 2020 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:

2020: Estimate based on reported administrative data. Programme reports vaccine stock-outs of one month at the national and subnational levels. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2019: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

2018: Estimate based on reported administrative data. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ S+ D+

2017: Estimate based on reported administrative data. Adjustments incorporated into the official coverage differs across antigens a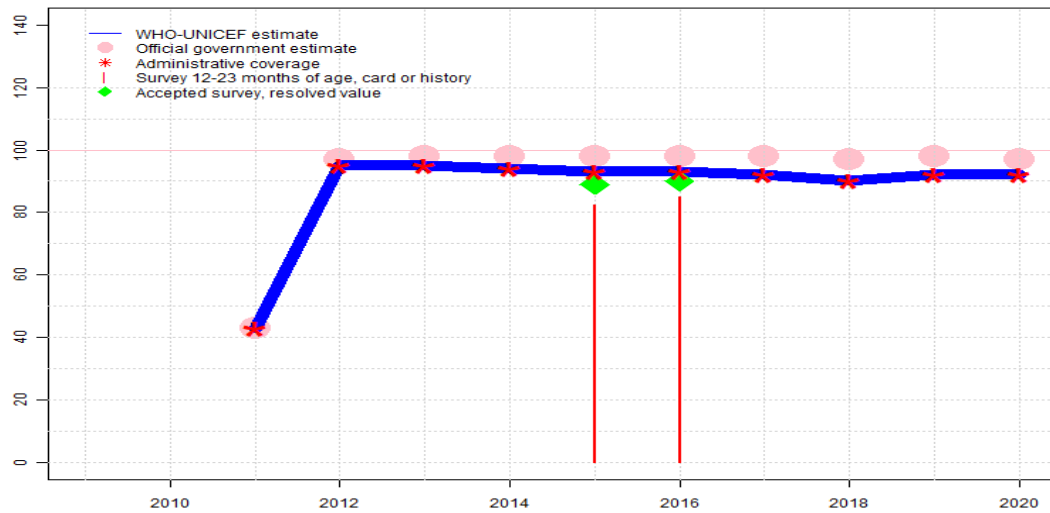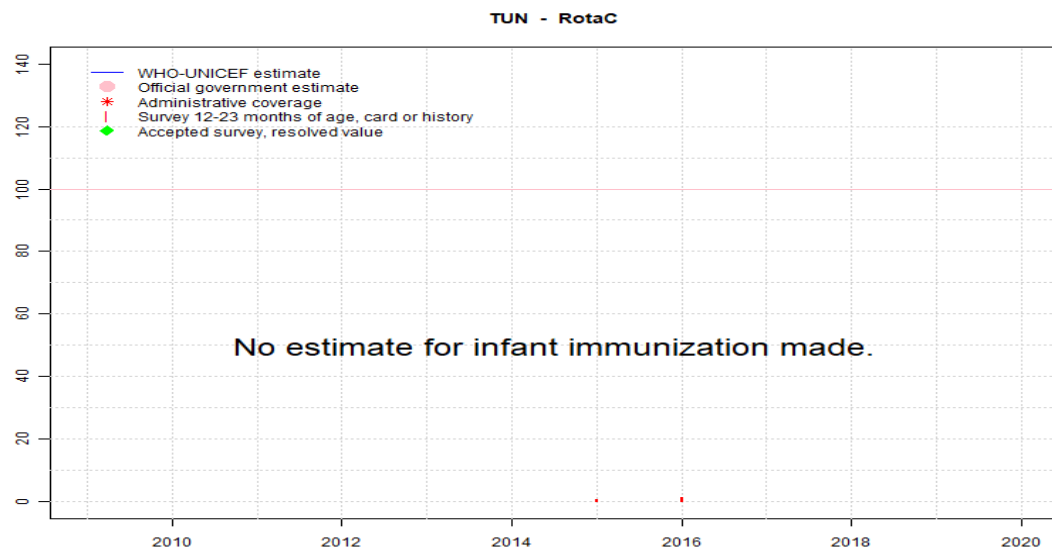nd over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2016: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey 2018 card or history results of 85 percent modifed for recall bias to 90 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 85 percent and 3rd dose card only coverage of 80 percent. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2015: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Tunisia Multiple Indicator Cluster Survey 2018 card or history results of 83 percent modifed for recall bias to 89 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 77 percent and 3rd dose card only coverage of 74 percent. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2014: Estimate based on reported data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2013: Estimate based on reported data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ S+ D+

2012: Estimate based on reported data. Adjustments incorporated into the official coverage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

2011: Estimate based on reported data. Hib vaccine re-introduced in April 2011 as a component of a DTP-HepB-Hib combination vaccine. Adjustments incorporated into the official cov-

erage differs across antigens and over time. Survey results for the 2015 and 2016 cohorts, which capture vaccinations received in both the private and public sector, do not always support this adjustment. GoC=R+ D+

Tunisia - RotaC

TUN - RotaC

- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

No estimate for infant immunization made.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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	0.5	1.2	NA	NA	NA	NA

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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.
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●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator
from the World Population Prospects: 2020 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.

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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.
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TUN - PcV3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey 12-23 months of age, card or history
- Accepted survey, resolved value

Description:

2020: Estimate based on reported administrative estimate. Vaccine introduced in 2019. Reporting started for 2020. Adjustments incorporated into the official coverage tend to differ across antigens and over time. GoC=R+ D+

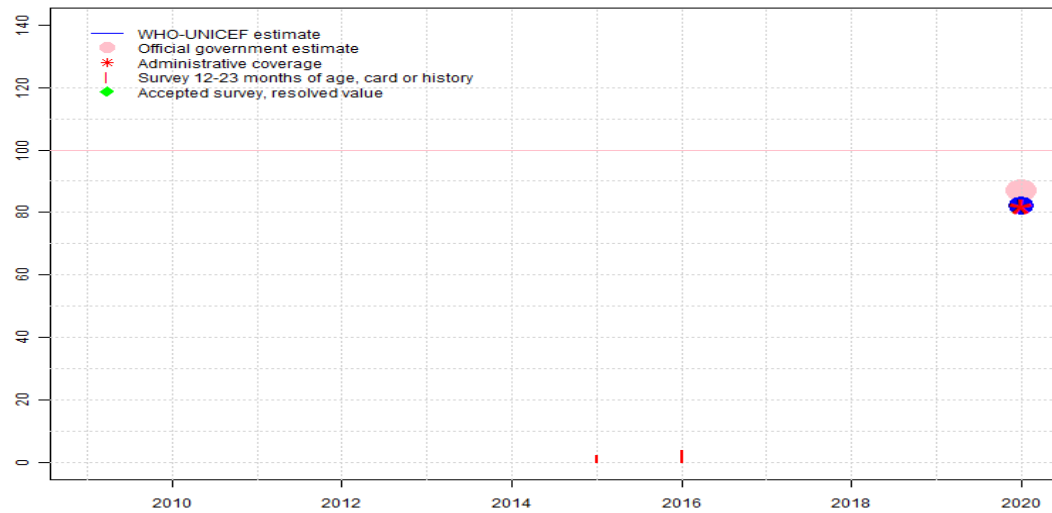|	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	82
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	87
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	82
Survey	NA	NA	NA	NA	NA	NA	2.1	3.8	NA	NA	NA	NA

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: 2020 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.

2016 Tunisia Multiple Indicator Cluster Survey 2018

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	98.4	12-23 m	662	87
BCG	Card	86.6	12-23 m	662	87
BCG	Card or History	98.9	12-23 m	662	87
BCG	History	12.3	12-23 m	662	87
DTP1	C or H <12 months	94.8	12-23 m	662	87
DTP1	Card	84.6	12-23 m	662	87
DTP1	Card or History	95.9	12-23 m	662	87
DTP1	History	11.3	12-23 m	662	87
DTP3	C or H <12 months	83.3	12-23 m	662	87
DTP3	Card	79.5	12-23 m	662	87
DTP3	Card or History	85.1	12-23 m	662	87
DTP3	History	5.6	12-23 m	662	87
HepB1	C or H <12 months	94.8	12-23 m	662	87
HepB1	Card	84.6	12-23 m	662	87
HepB1	Card or History	95.9	12-23 m	662	87
HepB1	History	11.3	12-23 m	662	87
HepB3	C or H <12 months	83.3	12-23 m	662	87
HepB3	Card	79.5	12-23 m	662	87
HepB3	Card or History	85.1	12-23 m	662	87
HepB3	History	5.6	12-23 m	662	87
HepBB	C or H <12 months	80.5	12-23 m	662	87
HepBB	Card	80.5	12-23 m	662	87
HepBB	Card or History	80.5	12-23 m	662	87
HepBB	History	0	12-23 m	662	87
Hib1	C or H <12 months	94.8	12-23 m	662	87
Hib1	Card	84.6	12-23 m	662	87
Hib1	Card or History	95.9	12-23 m	662	87
Hib1	History	11.3	12-23 m	662	87
Hib3	C or H <12 months	83.3	12-23 m	662	87
Hib3	Card	79.5	12-23 m	662	87
Hib3	Card or History	85.1	12-23 m	662	87
Hib3	History	5.6	12-23 m	662	87
IPV1	C or H <12 months	62.2	12-23 m	662	87
IPV1	Card	59.3	12-23 m	662	87
IPV1	Card or History	67.2	12-23 m	662	87
IPV1	History	7.9	12-23 m	662	87
MCV1	C or H <12 months	53.5	12-23 m	662	87
MCV1	Card	77.8	12-23 m	662	87
MCV1	Card or History	86.7	12-23 m	662	87
MCV1	History	8.9	12-23 m	662	87
PCV1	C or H <12 months	6.4	12-23 m	662	87
PCV1	Card	5	12-23 m	662	87
PCV1	Card or History	6.9	12-23 m	662	87
PCV1	History	1.9	12-23 m	662	87
PCV3	C or H <12 months	3	12-23 m	662	87
PCV3	Card	3.4	12-23 m	662	87
PCV3	Card or History	3.8	12-23 m	662	87
PCV3	History	0.4	12-23 m	662	87
Pol1	C or H <12 months	92.7	12-23 m	662	87
Pol1	Card	83.6	12-23 m	662	87
Pol1	Card or History	94.8	12-23 m	662	87
Pol1	History	11.2	12-23 m	662	87
Pol3	C or H <12 months	80.3	12-23 m	662	87
Pol3	Card	78.2	12-23 m	662	87
Pol3	Card or History	81.6	12-23 m	662	87
Pol3	History	3.4	12-23 m	662	87
RotaC	C or H <12 months	0.9	12-23 m	662	87
RotaC	Card	0.8	12-23 m	662	87
RotaC	Card or History	1.2	12-23 m	662	87
RotaC	History	0.4	12-23 m	662	87

2015 Tunisia Multiple Indicator Cluster Survey 2018

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	95.9	24-35 m	655	87
BCG	Card	78.3	24-35 m	655	87
BCG	Card or History	96.3	24-35 m	655	87
BCG	History	18.1	24-35 m	655	87
DTP1	C or H <12 months	91.9	24-35 m	655	87
DTP1	Card	77.2	24-35 m	655	87
DTP1	Card or History	93.5	24-35 m	655	87
DTP1	History	16.3	24-35 m	655	87
DTP3	C or H <12 months	82.5	24-35 m	655	87
DTP3	Card	73.6	24-35 m	655	87
DTP3	Card or History	82.5	24-35 m	655	87
DTP3	History	8.8	24-35 m	655	87

HepB1	C or H <12 months	91.9	24-35 m	655	87
HepB1	Card	77.2	24-35 m	655	87
HepB1	Card or History	93.5	24-35 m	655	87
HepB1	History	16.3	24-35 m	655	87
HepB3	C or H <12 months	82.5	24-35 m	655	87
HepB3	Card	73.6	24-35 m	655	87
HepB3	Card or History	82.5	24-35 m	655	87
HepB3	History	8.8	24-35 m	655	87
HepBB	C or H <12 months	74.7	24-35 m	655	87
HepBB	Card	75.1	24-35 m	655	87
HepBB	Card or History	75.1	24-35 m	655	87
HepBB	History	0	24-35 m	655	87
Hib1	C or H <12 months	91.9	24-35 m	655	87
Hib1	Card	77.2	24-35 m	655	87
Hib1	Card or History	93.5	24-35 m	655	87
Hib1	History	16.3	24-35 m	655	87
Hib3	C or H <12 months	82.5	24-35 m	655	87
Hib3	Card	73.6	24-35 m	655	87
Hib3	Card or History	82.5	24-35 m	655	87
Hib3	History	8.8	24-35 m	655	87
IPV1	C or H <12 months	58.5	24-35 m	655	87
IPV1	Card	55.5	24-35 m	655	87
IPV1	Card or History	69.9	24-35 m	655	87
IPV1	History	14.4	24-35 m	655	87
MCV1	C or H <12 months	89.5	24-35 m	655	87
MCV1	Card	73.7	24-35 m	655	87
MCV1	Card or History	90.3	24-35 m	655	87
MCV1	History	16.6	24-35 m	655	87
MCV2	C or H <12 months	71.5	24-35 m	655	87
MCV2	Card	63.3	24-35 m	655	87
MCV2	Card or History	74.5	24-35 m	655	87
MCV2	History	11.3	24-35 m	655	87
PCV1	C or H <12 months	3.9	24-35 m	655	87
PCV1	Card	2.8	24-35 m	655	87
PCV1	Card or History	4.3	24-35 m	655	87
PCV1	History	1.5	24-35 m	655	87
PCV3	C or H <12 months	1.8	24-35 m	655	87
PCV3	Card	2.1	24-35 m	655	87
PCV3	Card or History	2.1	24-35 m	655	87
PCV3	History	0	24-35 m	655	87

Pol1	C or H <12 months	91.8	24-35 m	655	87
Pol1	Card	75.8	24-35 m	655	87
Pol1	Card or History	92.8	24-35 m	655	87
Pol1	History	17	24-35 m	655	87
Pol3	C or H <12 months	78.2	24-35 m	655	87
Pol3	Card	74	24-35 m	655	87
Pol3	Card or History	80.6	24-35 m	655	87
Pol3	History	6.6	24-35 m	655	87
RotaC	C or H <12 months	0.5	24-35 m	655	87
RotaC	Card	0.4	24-35 m	655	87
RotaC	Card or History	0.5	24-35 m	655	87
RotaC	History	0.2	24-35 m	655	87

2010 Tunisie Enquête par grappes à indicateurs multiples (MICS 4), 2011-2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	98.1	18-29 m	-	84
BCG	Card	83	18-29 m	-	84
BCG	Card or History	98.2	18-29 m	600	84
BCG	History	15.2	18-29 m	-	84
DTP1	C or H <12 months	98.4	18-29 m	-	84
DTP1	Card	84	18-29 m	-	84
DTP1	Card or History	99.3	18-29 m	600	84
DTP1	History	15.3	18-29 m	-	84
DTP3	C or H <12 months	91.7	18-29 m	-	84
DTP3	Card	82.9	18-29 m	-	84
DTP3	Card or History	95.9	18-29 m	600	84
DTP3	History	13	18-29 m	-	84
HepB1	C or H <12 months	98.2	18-29 m	-	84
HepB1	Card	84.2	18-29 m	-	84
HepB1	Card or History	98.2	18-29 m	600	84
HepB1	History	14	18-29 m	-	84
HepB3	C or H <12 months	89.5	18-29 m	-	84
HepB3	Card	83.1	18-29 m	-	84
HepB3	Card or History	91.9	18-29 m	600	84
HepB3	History	8.8	18-29 m	-	84
MCV1	C or H <12 months	85.9	18-29 m	-	84
MCV1	Card	79	18-29 m	-	84

MCV1	Card or History	94.3	18-29 m	600	84
MCV1	History	15.3	18-29 m	-	84
Pol1	C or H <12 months	98.4	18-29 m	-	84
Pol1	Card	83.9	18-29 m	-	84
Pol1	Card or History	99.3	18-29 m	600	84
Pol1	History	15.5	18-29 m	-	84
Pol3	C or H <12 months	89.1	18-29 m	-	84
Pol3	Card	82.8	18-29 m	-	84
Pol3	Card or History	93.8	18-29 m	600	84
Pol3	History	11	18-29 m	-	84

2005 L'enquête sur la santé et le bien-être de la mère et l'enfant MICS3, Tunisie 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	98.6	12-23 m	595	-
DTP3	Card or History	99.7	12-23 m	595	-
HepB3	Card or History	99.2	12-23 m	595	-
Hib3	Card or History	99.7	12-23 m	595	-

Pol3	Card or History	99.7	12-23 m	595	-

2004 L'enquête sur la santé et le bien-être de la mère et l'enfant MICS3, Tunisie 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV1	Card or History	98.5	24-35 m	595	-

1999 Tunisia MICS 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	97.4	12-23 m	2158	-
DTP3	Card or History	96	12-23 m	2158	-
HepB3	Card or History	87.6	12-23 m	2158	-
MCV1	Card or History	71.3	12-23 m	2158	-
Pol3	Card or History	96	12-23 m	2158	-

Further information and estimates for previous years are available at:
http://www.data.unicef.org/child-health/immunization
https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/data-statistics-and-graphics