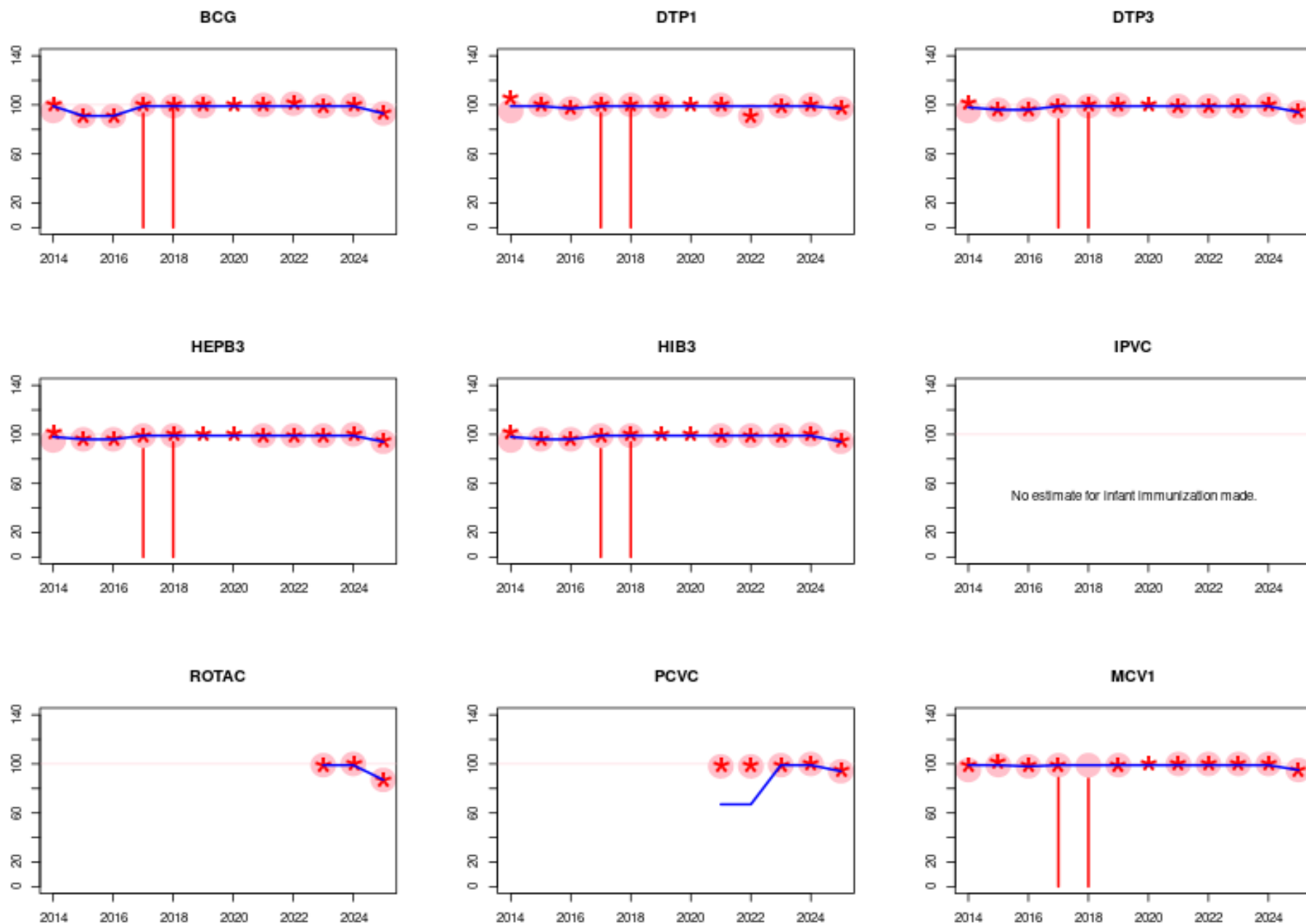




BACKGROUND NOTE Each year WHO and UNICEF jointly review reports submitted by Member States regarding national immunization coverage, finalized survey reports as well as data from published and grey literature. Based on these data, with due consideration to potential biases and the views of local experts, WHO and UNICEF attempt to distinguish between situations where available empirical data accurately reflect immunization system performance and those where the data are likely compromised and present a misleading view of coverage. The estimates refer to immunizations delivered through routine immunization services to children less than 12 months of age, or at the age specified in the recommended immunization schedule, for whom vaccinations are recorded. Immunizations received through supplemental immunization activities, such as polio and measles campaigns, are not included.

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. Bull World Health Organ. * Burton et al. 2012. PLoS One.
* Brown et al. 2013. Open Pub Health Journal. * Danovaro-Holliday et al. 2021. Gates Open Res.

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 6-11, 12-23 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 data collection period.

ABBREVIATIONS AND DEFINITIONS

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.

IPV1: percentage of surviving infants who received the first dose of inactivated polio vaccine.

IPVC: percentage of surviving infants who received the final recommended dose of IPV in the primary series, according to the national immunization schedule primary series (e.g., second or third dose).

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 in the production of the estimate.

HEPB: 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.

PCVC: percentage of surviving infants who received the final recommended dose of pneumococcal conjugate vaccine according to the national immunization schedule (e.g., second or third dose).

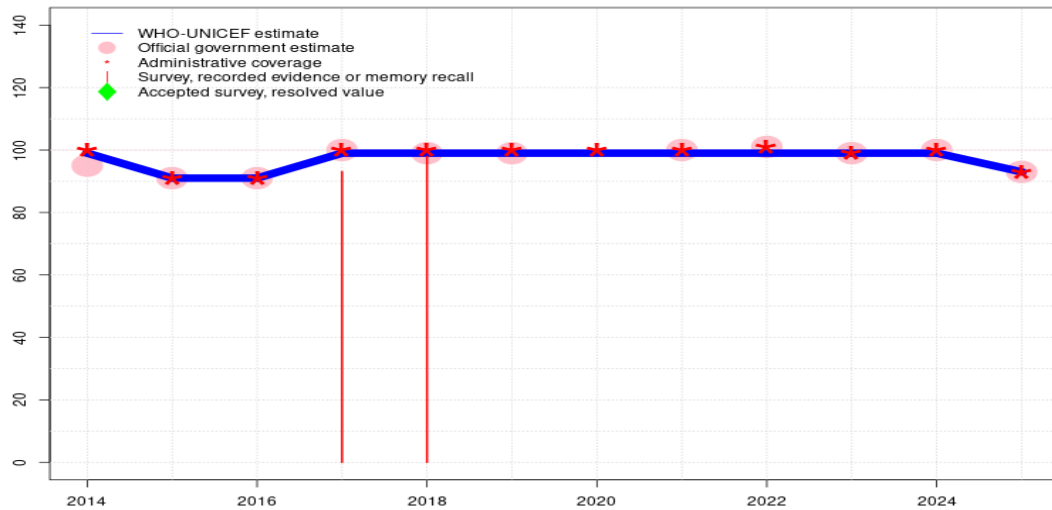
YFV: percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

MENGA: percentage of children who received one dose of meningococcal A conjugate vaccine. MENGA coverage estimates produced for countries in the meningitis belt of sub-Saharan Africa.

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Tonga - BCG

TON - BCG



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	99	91	91	99	99	99	99	99	99	99	99	93
Estimate GoC	••	••	•	••	•	•	•	•	•	•	•	•
Official	95	91	91	100	99	99	-	100	101	99	100	93
Administrative	100	91	91	100	100	100	100	100	101	99	100	93
Survey	-	-	-	93	98	-	-	-	-	-	-	-

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: 2024 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:

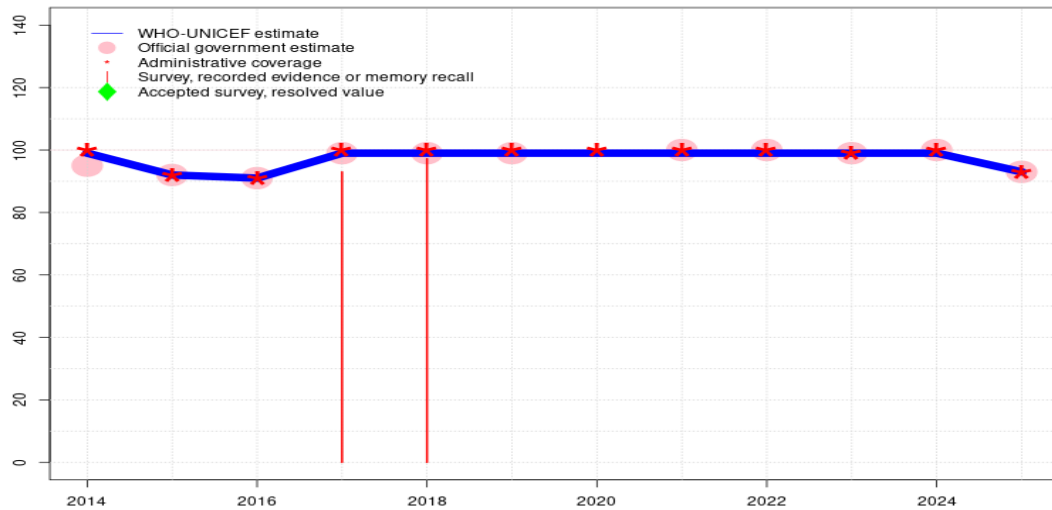
- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Estimate informed by interpolation between reported data. Reported data excluded because 101 percent greater than 100 percent. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2019: Estimate informed by reported data. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 235 less than 300. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. Estimate challenged by: D-
- 2017: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 284 less than 300. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
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Tonga - BCG

births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Reported adjustment to administrative data are unexplained. GoC=R+ D+

Tonga - HEPBB

TON - HEPBB



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	99	92	91	99	99	99	99	99	99	99	99	93
Estimate GoC	••	••	•	••	•	•	•	•	•	•	•	•
Official	95	92	91	99	99	99	-	100	100	99	100	93
Administrative	100	92	91	100	100	100	100	100	100	99	100	93
Survey	-	-	-	93	97	-	-	-	-	-	-	-

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- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2024 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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- 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:

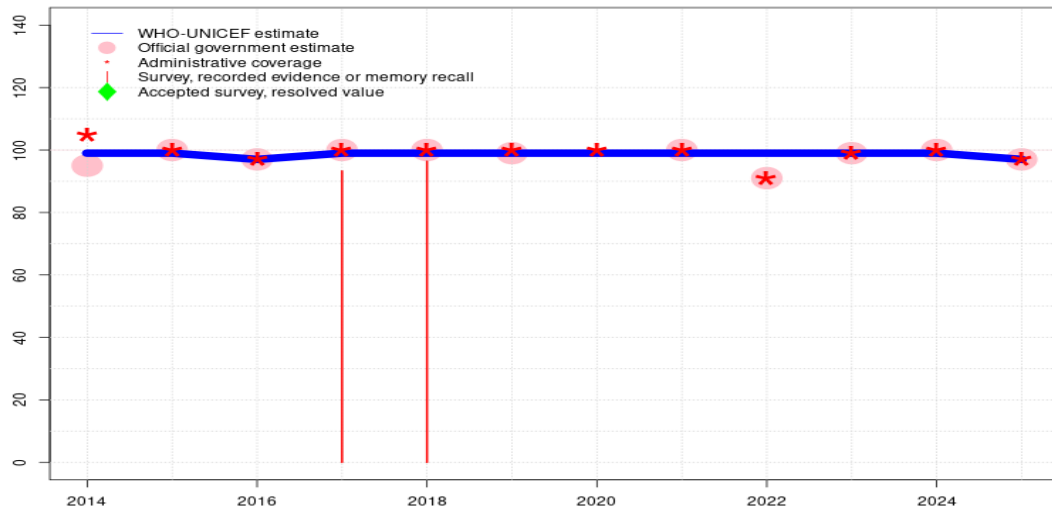
- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2019: Estimate informed by reported data. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 235 less than 300. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. Estimate challenged by: D-
- 2017: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 284 less than 300. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates

Tonga - HEPBB

that are much lower, around 11 deaths per 1000 live-births. Reported adjustment to administrative data are unexplained. GoC=R+ D+

Tonga - DTP1

TON - DTP1



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	99	99	97	99	99	99	99	99	99	99	99	97
Estimate GoC	••	••	••	••	••	•	••	•	•	•	•	•
Official	95	100	97	100	100	99	-	100	91	99	100	97
Administrative	105	100	97	100	100	100	100	100	91	99	100	97
Survey	-	-	-	93	96	-	-	-	-	-	-	-

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- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2024 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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Description:

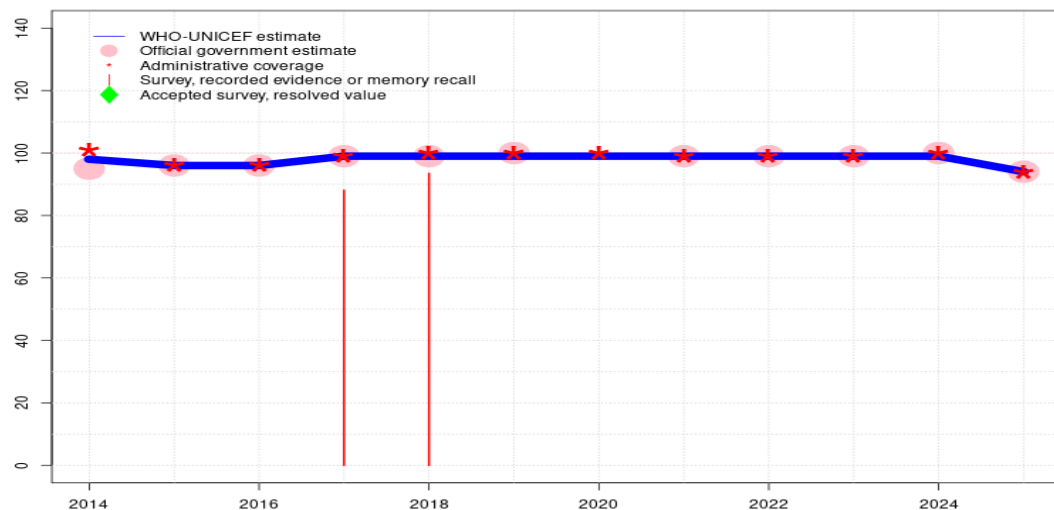
- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Estimate informed by estimated DTP3 coverage assuming zero dropout. Estimate challenged by: D-R-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Programme reports national-level vaccine stockout of unspecified duration. GoC=R+ D+
- 2019: Estimate informed by estimated DTP3 coverage adjusted for dropout. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. Estimate challenged by: D-R-
- 2018: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 235 less than 300. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. GoC=R+ D+
- 2017: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 284 less than 300. GoC=R+ D+
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- 2015: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2014: Estimate informed by interpolation between reported data. Reported data excluded be-

Tonga - DTP1

cause 105 percent greater than 100 percent. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Reported adjustment to administrative data are unexplained. GoC=R+ D+

Tonga - DTP3

TON - DTP3



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	98	96	96	99	99	99	99	99	99	99	99	94
Estimate GoC	●●	●●	●●	●●	●	●	●	●	●	●	●	●
Official	95	96	96	99	99	100	-	99	99	99	100	94
Administrative	101	96	96	99	100	100	100	99	99	99	100	94
Survey	-	-	-	88	94	-	-	-	-	-	-	-

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- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2024 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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- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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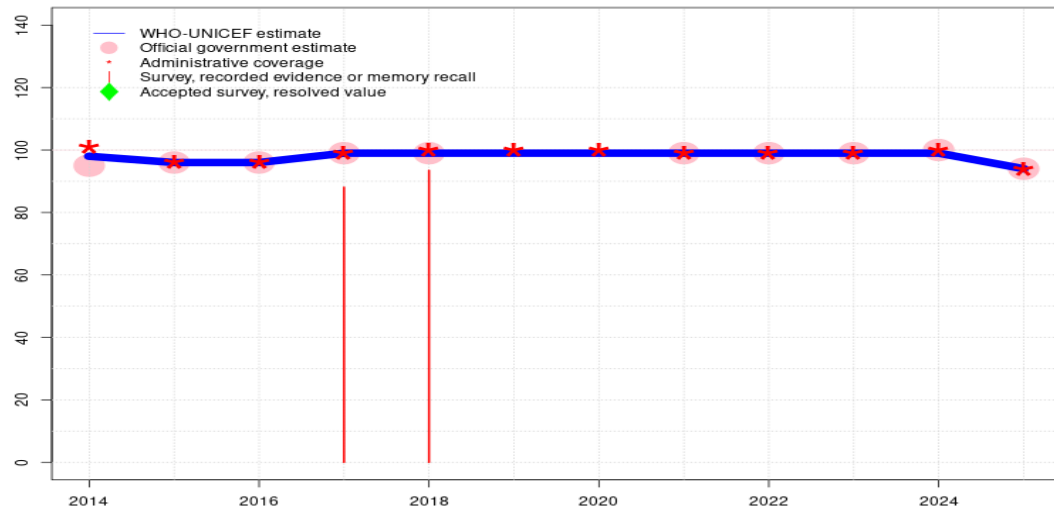
- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Programme reports national-level vaccine stockout of unspecified duration. Estimate challenged by: D-
- 2019: Estimate informed by reported data. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 235 less than 300. Tonga Multiple Indicator Cluster Survey 2019 record or recall results of 94 percent modified for recall bias to 95 percent based on 1st dose record or recall coverage of 96 percent, 1st dose record only coverage of 94 percent and 3rd dose record only coverage of 93 percent. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. Estimate challenged by: D-
- 2017: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 284 less than 300. Tonga Multiple Indicator Cluster Survey 2019 record or recall results of 88 percent modified for recall bias to 91 percent based on 1st dose record or recall coverage of 93 percent, 1st dose record only coverage of 89 percent and 3rd dose record only coverage of 87 percent. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+

Tonga - DTP3

- 2015: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2014: Estimate informed by interpolation between reported data. Reported data excluded because 101 percent greater than 100 percent. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Reported adjustment to administrative data are unexplained. GoC=R+ D+

Tonga - HEPB3

TON - HEPB3



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	98	96	96	99	99	99	99	99	99	99	99	94
Estimate GoC	••	••	••	••	•	•	•	•	•	•	•	•
Official	95	96	96	99	99	-	-	99	99	99	100	94
Administrative	101	96	96	99	100	100	100	99	99	99	100	94
Survey	-	-	-	88	94	-	-	-	-	-	-	-

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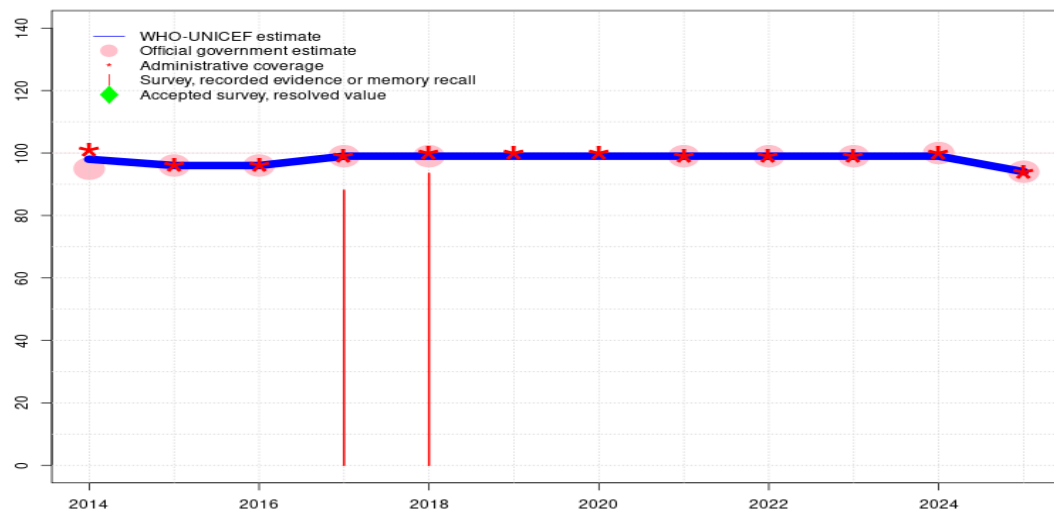
Description:

- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
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- 2019: Estimate informed by reported administrative data. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 235 less than 300. Tonga Multiple Indicator Cluster Survey 2019 record or recall results of 94 percent modified for recall bias to 95 percent based on 1st dose record or recall coverage of 96 percent, 1st dose record only coverage of 94 percent and 3rd dose record only coverage of 93 percent. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. Estimate challenged by: D-
- 2017: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 284 less than 300. Tonga Multiple Indicator Cluster Survey 2019 record or recall results of 88 percent modified for recall bias to 91 percent based on 1st dose record or recall coverage of 93 percent, 1st dose record only coverage of 89 percent and 3rd dose record only coverage of 87 percent. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+

- 2015: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2014: Estimate informed by interpolation between reported data. Reported data excluded because 101 percent greater than 100 percent. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Reported adjustment to administrative data are unexplained. GoC=R+ D+

Tonga - HIB3

TON - HIB3



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	98	96	96	99	99	99	99	99	99	99	99	94
Estimate GoC	••	••	••	••	•	•	•	•	•	•	•	•
Official	95	96	96	99	99	-	-	99	99	99	100	94
Administrative	101	96	96	99	100	100	100	99	99	99	100	94
Survey	-	-	-	88	94	-	-	-	-	-	-	-

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: 2024 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.

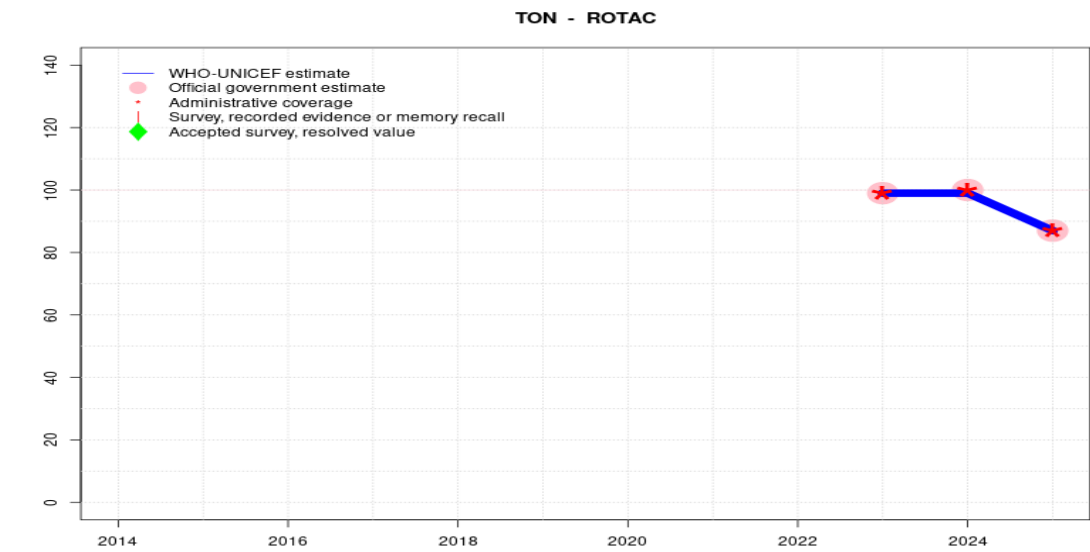
Description:

- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Programme reports national-level vaccine stockout of unspecified duration. Estimate challenged by: D-
- 2019: Estimate informed by reported administrative data. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 235 less than 300. Tonga Multiple Indicator Cluster Survey 2019 record or recall results of 94 percent modified for recall bias to 95 percent based on 1st dose record or recall coverage of 96 percent, 1st dose record only coverage of 94 percent and 3rd dose record only coverage of 93 percent. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. Estimate challenged by: D-
- 2017: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 284 less than 300. Tonga Multiple Indicator Cluster Survey 2019 record or recall results of 88 percent modified for recall bias to 91 percent based on 1st dose record or recall coverage of 93 percent, 1st dose record only coverage of 89 percent and 3rd dose record only coverage of 87 percent. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+

Tonga - HIB3

- 2015: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2014: Estimate informed by interpolation between reported data. Reported data excluded because 101 percent greater than 100 percent. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Reported adjustment to administrative data are unexplained. GoC=R+ D+

Tonga - ROTAC



Description:

2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-

2024: Estimate informed by reported data. Estimate challenged by: D-

2023: Estimate informed by reported data. Rotavirus vaccine introduced in 2021. Reporting for the last dose started in 2023. Estimate challenged by: D-

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	-	-	-	-	-	-	-	-	-	99	99	87
Estimate GoC	-	-	-	-	-	-	-	-	-	●	●	●
Official	-	-	-	-	-	-	-	-	-	99	100	87
Administrative	-	-	-	-	-	-	-	-	-	99	100	87
Survey	-	-	-	-	-	-	-	-	-	-	-	-

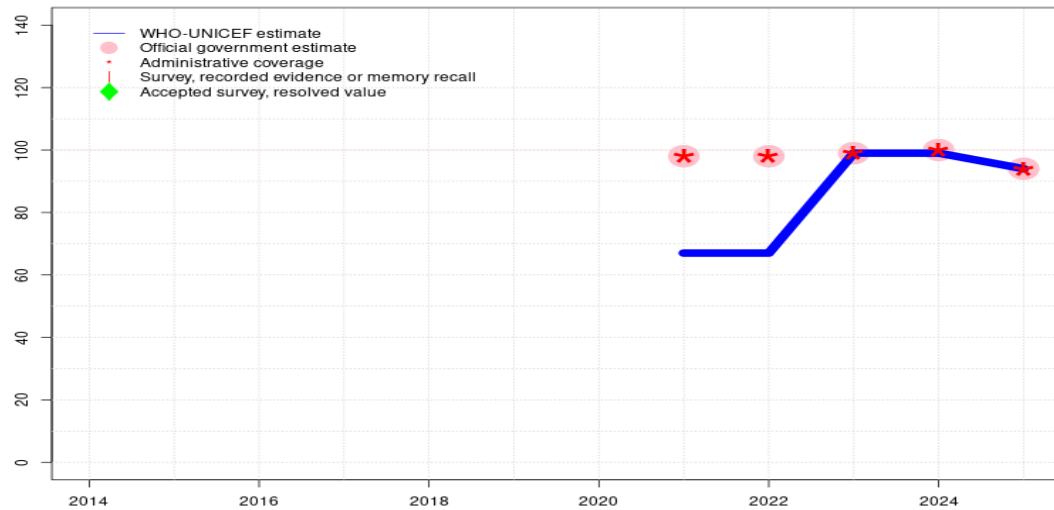
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2024 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.

Tonga - PCVC

TON - PCVC



Description:

- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Programme reports 98 percent coverage achieved in 69 percent of the national target population. Estimated coverage reflects that achieved in the national annual cohort. Estimate challenged by: D-R-
- 2021: Pneumococcal conjugate vaccine introduced in 2021. Reporting started in 2021. Programme reports 98 percent coverage achieved in 69 percent of the national target population. Estimated coverage reflects that achieved in the annual national target population. Estimate challenged by: D-R-

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	-	-	-	-	-	-	-	67	67	99	99	94
Estimate GoC	-	-	-	-	-	-	-	●	●	●	●	●
Official	-	-	-	-	-	-	-	98	98	99	100	94
Administrative	-	-	-	-	-	-	-	98	98	99	100	94
Survey	-	-	-	-	-	-	-	-	-	-	-	-

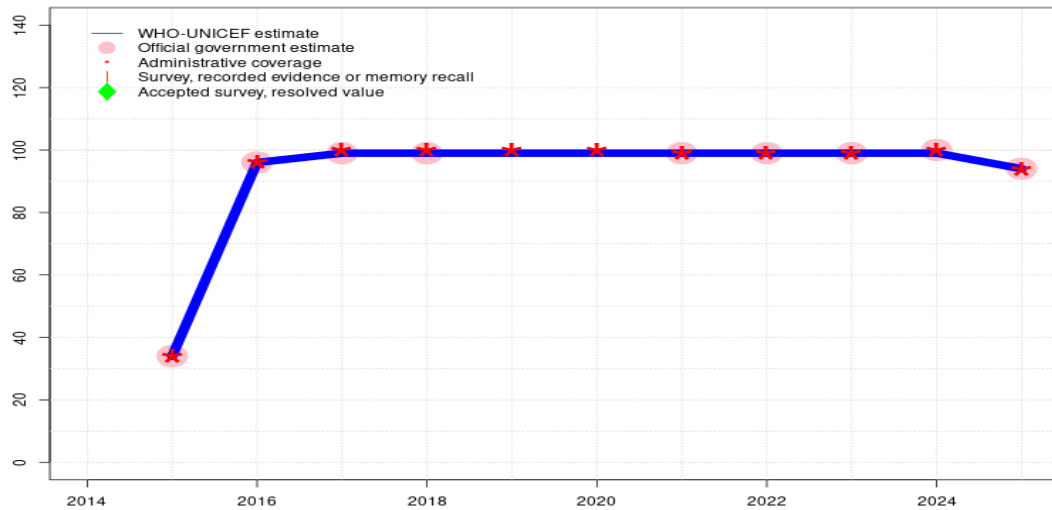
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2024 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.

Tonga - IPV1

TON - IPV1



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	-	34	96	99	99	99	99	99	99	99	99	94
Estimate GoC	-	•	••	••	•	•	•	•	•	•	•	•
Official	-	34	96	99	99	-	-	99	99	99	100	94
Administrative	-	34	96	100	100	100	100	99	99	99	100	94
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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.

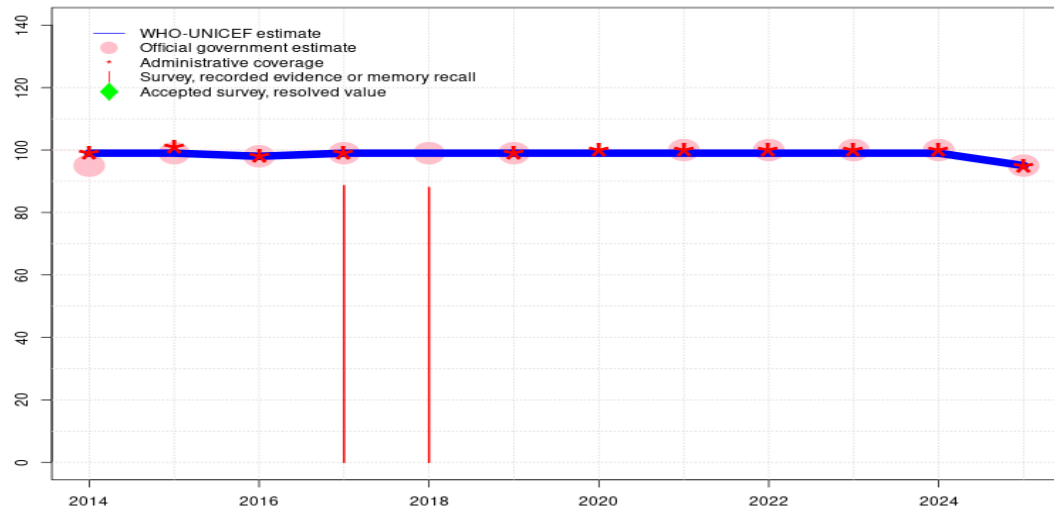
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Programme reports national-level vaccine stockout of unspecified duration. Estimate challenged by: D-
- 2019: Estimate informed by reported administrative data. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. Estimate challenged by: D-
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2015: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Inactivated polio vaccine introduced in December 2015. Programme reports 100 percent coverage in three percent of the national target population. Estimate informed by coverage achieved in the total annual national population. Estimate challenged by: D-

Tonga - MCV1

TON - MCV1



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	99	99	98	99	99	99	99	99	99	99	99	95
Estimate GoC	●●	●●	●●	●●	●●	●	●	●	●	●	●	●
Official	95	99	98	99	99	99	-	100	100	100	100	95
Administrative	99	101	98	99	-	99	100	100	100	100	100	95
Survey	-	-	-	89	88	-	-	-	-	-	-	-

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: 2024 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:

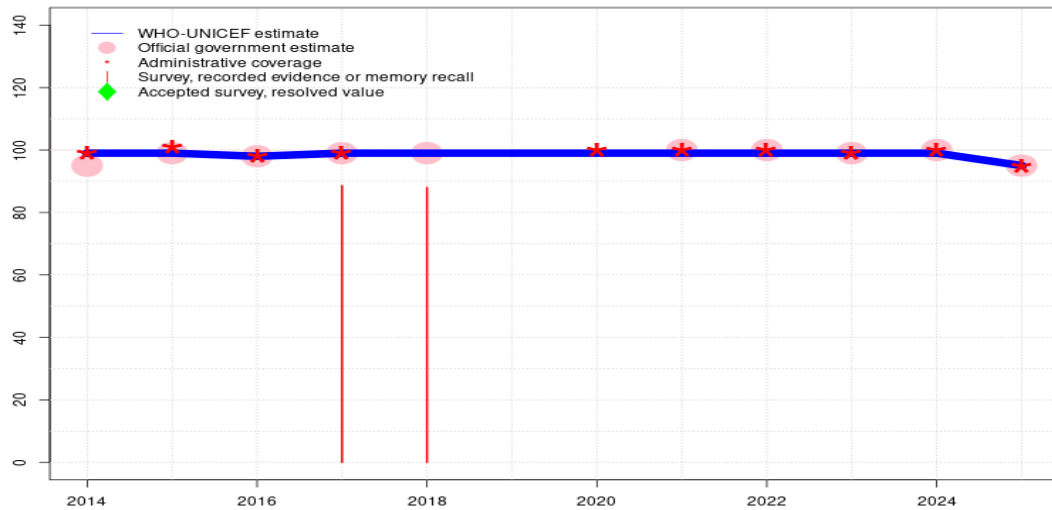
- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by interpolation between reported data. Reported data excluded. Reported number of doses administered are inconsistent with prior years and with reported national cohort size. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2019: Estimate informed by reported data. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. Estimate challenged by: D-
- 2018: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 235 less than 300. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. GoC=R+
- 2017: Estimate informed by reported data. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 284 less than 300. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2015: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Reported target population data for

Tonga - MCV1

2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Estimate for MCV1 is likely underestimated slightly because the survey results reflect coverage for children aged 12-23 m at the time of survey while measles vaccine is recommended at 12 m. Reported adjustment to administrative data are unexplained. GoC=R+ D+

Tonga - RCV1

TON - RCV1



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	99	99	98	99	99	99	99	99	99	99	99	95
Estimate GoC	●●	●●	●●	●●	●●	●	●	●	●	●	●	●
Official	95	99	98	99	99	-	-	100	100	99	100	95
Administrative	99	101	98	99	-	-	100	100	100	99	100	95
Survey	-	-	-	89	88	-	-	-	-	-	-	-

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.

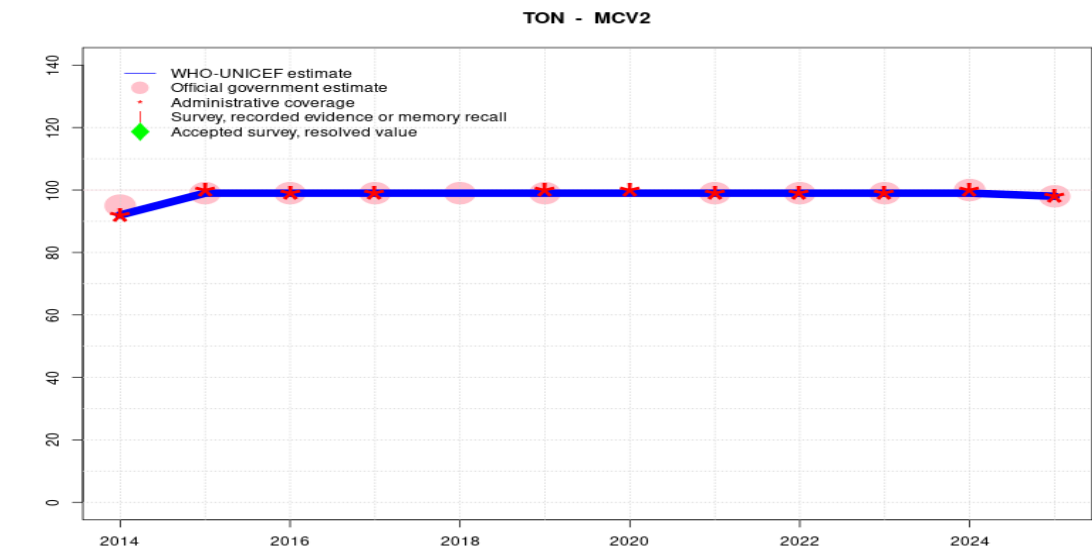
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2024 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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:

- 2025: Estimate based on estimated MCV1. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2023: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2022: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2021: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2020: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2019: Estimate based on estimated MCV1. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. Estimate challenged by: D-
- 2018: Estimate based on estimated MCV1. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 235 less than 300. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. GoC=R+
- 2017: Estimate based on estimated MCV1. Tonga Multiple Indicator Cluster Survey 2019 results ignored. Sample size 284 less than 300. GoC=R+ D+
- 2016: Estimate based on estimated MCV1. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2015: Estimate based on estimated MCV1. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2014: Estimate based on estimated MCV1. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much

lower, around 11 deaths per 1000 live-births. Reported adjustment to administrative data are unexplained. GoC=R+ D+



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimate	92	99	99	99	99	99	99	99	99	99	99	98
Estimate GoC	••	••	•	••	••	••	•	•	•	•	•	•
Official	95	99	99	99	99	99	-	99	99	99	100	98
Administrative	92	100	99	99	-	100	100	99	99	99	100	98
Survey	-	-	-	-	-	-	-	-	-	-	-	-

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: 2024 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:

- 2025: Estimate informed by reported data. WHO and UNICEF are aware of the 2024 Multiple Indicator Cluster Survey and await final results. Estimate challenged by: D-
- 2024: Estimate informed by reported data. Estimate challenged by: D-
- 2023: Estimate informed by interpolation between reported data. Reported data excluded. Reported number of doses administered are inconsistent with prior years and with reported national cohort size. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2019: Estimate informed by reported data. A report of supplementary immunization activity during the measles outbreak in Tonga notes that most measles cases during the outbreak were among children aged 10 to 24 years and among children aged less than nine months (who are not age eligible for measles vaccine). This observation would suggest coverage levels that are higher than an independent vaccination coverage survey for the 2011 birth cohort. Reviews of the routine immunization system as part of the outbreak investigation also suggest the immunization delivery system is robust overall in spite of the outbreak. GoC=R+ D+
- 2018: Estimate informed by reported data. Programme has expressed disagreement with the results of the 2012 Demographic and Health Survey providing evidence of the vaccination experience for the 2011 birth cohort. In a 2015 health sector review report, the Government notes that the home-based records seen during the survey may not have been up-to-date and their concern that caregiver recall of vaccination history is "inaccurate". Results from the 2012 Demographic and Health Survey suggest coverage among children with documented evidence in home-based records are consistent with reported high vaccination coverage levels by the government. The survey suggests that 48 percent of children currently maintained a home-based record at the time of the survey. There is recognition that there may have been problems with caregiver recall of vaccination history in the survey. It is relevant to note, however, that the survey did identify children with no evidence of vaccination. GoC=R+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates that are much lower, around 11 deaths per 1000 live-births. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Reported target population data for 2014 through 2016 suggest an implied infant mortality rate of 60 deaths per 1000 live-births which is inconsistent with other published data suggesting infant mortality rates

Tonga - MCV2

that are much lower, around 11 deaths per 1000 live-births. Reported adjustment to administrative data are unexplained. GoC=R+ D+

Tonga - Survey Details

NOTE A survey to measure vaccination coverage for infants (i.e., children aged 0-11 months) will sample children aged 12-23 months at the time of survey to capture the youngest annual cohort of children who should have completed the vaccination schedule. Because WUENIC are for infant vaccinations, survey data in this report are presented to reflect the birth year of the youngest survey cohort. For example, results for a survey conducted during December 2020 among children aged 12-23 months at the time of the survey reflect the immunization experience of children born in 2019. Depending on the timing of survey field work, results may reflect the immunization experience of children born and vaccinated one or two years prior to the survey field work.

The survey results below present vaccination coverage estimates by antigen, confirmation method, and child's age at the time of the survey. Coverage based on **Recall** reflects information based upon a mother's or caregiver's memory. Coverage based on **Record** reflects information drawn from documented vaccination history in home- and/or facility-based records. **Evidence seen** reflects the percentage of children in the sample with documented evidence of vaccination history seen by the survey team.

2018 Tonga Multiple Indicator Cluster Survey 2019

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Recall	2.8	12-23 m	235	97
BCG	Record	95.2	12-23 m	235	97
BCG	Record or Recall	98	12-23 m	235	97
BCG	Record or Recall<12m	97	12-23 m	235	97
DTP1	Recall	2.3	12-23 m	235	97
DTP1	Record	94.1	12-23 m	235	97
DTP1	Record or Recall	96.4	12-23 m	235	97
DTP1	Record or Recall<12m	95	12-23 m	235	97
DTP3	Recall	0.2	12-23 m	235	97
DTP3	Record	93.4	12-23 m	235	97
DTP3	Record or Recall	93.5	12-23 m	235	97
DTP3	Record or Recall<12m	90.7	12-23 m	235	97
HEPB1	Recall	2.3	12-23 m	235	97
HEPB1	Record	94.1	12-23 m	235	97
HEPB1	Record or Recall	96.4	12-23 m	235	97
HEPB1	Record or Recall<12m	95	12-23 m	235	97
HEPB3	Recall	0.2	12-23 m	235	97
HEPB3	Record	93.4	12-23 m	235	97
HEPB3	Record or Recall	93.5	12-23 m	235	97

HEPB3	Record or Recall<12m	90.7	12-23 m	235	97
HEPBB	Recall	1.8	12-23 m	235	97
HEPBB	Record	95.4	12-23 m	235	97
HEPBB	Record or Recall	97.2	12-23 m	235	97
HEPBB	Record or Recall<12m	96.2	12-23 m	235	97
HIB1	Recall	2.3	12-23 m	235	97
HIB1	Record	94.1	12-23 m	235	97
HIB1	Record or Recall	96.4	12-23 m	235	97
HIB1	Record or Recall<12m	95	12-23 m	235	97
HIB3	Recall	0.2	12-23 m	235	97
HIB3	Record	93.4	12-23 m	235	97
HIB3	Record or Recall	93.5	12-23 m	235	97
HIB3	Record or Recall<12m	90.7	12-23 m	235	97
MCV1	Recall	6.8	12-23 m	235	97
MCV1	Record	81.1	12-23 m	235	97
MCV1	Record or Recall	88	12-23 m	235	97
MCV2	Record or Recall<12m	80.5	24-35 m	284	-
RCV1	Recall	6.8	12-23 m	235	97
RCV1	Record	81.1	12-23 m	235	97
RCV1	Record or Recall	88	12-23 m	235	97

2017 Tonga Multiple Indicator Cluster Survey 2019

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Recall	4.2	24-35 m	284	-
BCG	Record	89	24-35 m	284	-
BCG	Record or Recall	93.1	24-35 m	284	-
BCG	Record or Recall<12m	93.1	24-35 m	284	-
DTP1	Recall	4.8	24-35 m	284	-
DTP1	Record	88.5	24-35 m	284	-
DTP1	Record or Recall	93.3	24-35 m	284	-
DTP1	Record or Recall<12m	92.6	24-35 m	284	-
DTP3	Recall	1.4	24-35 m	284	-
DTP3	Record	86.7	24-35 m	284	-
DTP3	Record or Recall	88.1	24-35 m	284	-
DTP3	Record or Recall<12m	87.4	24-35 m	284	-
HEPB1	Recall	4.8	24-35 m	284	-
HEPB1	Record	88.5	24-35 m	284	-
HEPB1	Record or Recall	93.3	24-35 m	284	-

Tonga - Survey Details

HEPB1	Record or Recall<12m	92.6	24-35 m	284	-
HEPB3	Recall	1.4	24-35 m	284	-
HEPB3	Record	86.7	24-35 m	284	-
HEPB3	Record or Recall	88.1	24-35 m	284	-
HEPB3	Record or Recall<12m	87.4	24-35 m	284	-
HEPBB	Recall	4.8	24-35 m	284	-
HEPBB	Record	88.1	24-35 m	284	-
HEPBB	Record or Recall	93	24-35 m	284	-
HEPBB	Record or Recall<12m	92.8	24-35 m	284	-
HIB1	Recall	4.8	24-35 m	284	-
HIB1	Record	88.5	24-35 m	284	-
HIB1	Record or Recall	93.3	24-35 m	284	-
HIB1	Record or Recall<12m	92.6	24-35 m	284	-
HIB3	Recall	1.4	24-35 m	284	-
HIB3	Record	86.7	24-35 m	284	-
HIB3	Record or Recall	88.1	24-35 m	284	-
HIB3	Record or Recall<12m	87.4	24-35 m	284	-
MCV1	Recall	4.8	24-35 m	284	-
MCV1	Record	83.7	24-35 m	284	-
MCV1	Record or Recall	88.6	24-35 m	284	-
MCV1	Record or Recall<12m	88.1	24-35 m	284	-
RCV1	Recall	4.8	24-35 m	284	-
RCV1	Record	83.7	24-35 m	284	-
RCV1	Record or Recall	88.6	24-35 m	284	-
RCV1	Record or Recall<12m	88.1	24-35 m	284	-

2011 Kingdom of Tonga Demographic and Health Survey 2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Recall	41.2	12-23 m	159	48
BCG	Record	48.2	12-23 m	148	48
BCG	Record or Recall	89.4	12-23 m	307	48
BCG	Record or Recall<12m	89.4	12-23 m	307	48
DTP1	Recall	38.1	12-23 m	159	48
DTP1	Record	48	12-23 m	148	48
DTP1	Record or Recall	86	12-23 m	307	48
DTP1	Record or Recall<12m	86	12-23 m	307	48
DTP3	Recall	19.2	12-23 m	159	48
DTP3	Record	46.5	12-23 m	148	48

DTP3	Record or Recall	65.7	12-23 m	307	48
DTP3	Record or Recall<12m	65.1	12-23 m	307	48
HEPB1	Recall	38.1	12-23 m	159	48
HEPB1	Record	48	12-23 m	148	48
HEPB1	Record or Recall	86	12-23 m	307	48
HEPB1	Record or Recall<12m	86	12-23 m	307	48
HEPB3	Recall	19.2	12-23 m	159	48
HEPB3	Record	46.5	12-23 m	148	48
HEPB3	Record or Recall	65.7	12-23 m	307	48
HEPB3	Record or Recall<12m	65.1	12-23 m	307	48
HIB1	Recall	38.1	12-23 m	159	48
HIB1	Record	48	12-23 m	148	48
HIB1	Record or Recall	86	12-23 m	307	48
HIB1	Record or Recall<12m	86	12-23 m	307	48
HIB3	Recall	19.2	12-23 m	159	48
HIB3	Record	46.5	12-23 m	148	48
HIB3	Record or Recall	65.7	12-23 m	307	48
HIB3	Record or Recall<12m	65.1	12-23 m	307	48
MCV1	Recall	36.2	12-23 m	159	48
MCV1	Record	30	12-23 m	148	48
MCV1	Record or Recall	66.2	12-23 m	307	48
MCV1	Record or Recall<12m	3.5	12-23 m	307	48

2010 Kingdom of Tonga Demographic and Health Survey 2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Record or Recall<12m	86.8	24-35 m	383	-
DTP1	Record or Recall<12m	83.4	24-35 m	383	-
DTP3	Record or Recall<12m	59.9	24-35 m	383	-
HEPB1	Record or Recall<12m	83.4	24-35 m	383	-
HEPB3	Record or Recall<12m	59.9	24-35 m	383	-
HIB1	Record or Recall<12m	83.4	24-35 m	383	-
HIB3	Record or Recall<12m	59.9	24-35 m	383	-
MCV1	Record or Recall<12m	2.1	24-35 m	383	-

2009 Kingdom of Tonga Demographic and Health Survey 2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Record or Recall<12m	85.4	36-47 m	334	-
DTP1	Record or Recall<12m	83.6	36-47 m	334	-
DTP3	Record or Recall<12m	59.4	36-47 m	334	-
HEPB1	Record or Recall<12m	83.6	36-47 m	334	-
HEPB3	Record or Recall<12m	59.4	36-47 m	334	-
HIB1	Record or Recall<12m	83.6	36-47 m	334	-
HIB3	Record or Recall<12m	59.4	36-47 m	334	-
MCV1	Record or Recall<12m	2.3	36-47 m	334	-

2008 Kingdom of Tonga Demographic and Health Survey 2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Record or Recall<12m	84.6	48-59 m	302	-
DTP1	Record or Recall<12m	80.6	48-59 m	302	-

DTP3	Record or Recall<12m	61.3	48-59 m	302	-
HEPB1	Record or Recall<12m	80.6	48-59 m	302	-
HEPB3	Record or Recall<12m	61.3	48-59 m	302	-
HIB1	Record or Recall<12m	80.6	48-59 m	302	-
HIB3	Record or Recall<12m	61.3	48-59 m	302	-
MCV1	Record or Recall<12m	6.3	48-59 m	302	-

2002 Evaluation of Immunization Program of the Kingdom of Tonga, 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Record or Recall	87	12-23 m	114	-
DTP3	Record or Recall	96	12-23 m	114	-
HEPB3	Record or Recall	94	12-23 m	114	-
MCV1	Record or Recall	84	12-23 m	114	-

Further information and estimates for previous years are available at:
<https://data.unicef.org/topic/child-health/immunization/>
<https://immunizationdata.who.int/listing.html>