

**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.

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.

**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. For countries utilizing IPV containing vaccine only, i.e., no recommended dose of OPV, 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.

**IPV2:** percentage of surviving infants who received a 2nd dose of inactivated polio vaccine. IPV2 coverage estimates produced for OPV using countries.

**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.

**HEPB3:** 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 if coverage for the booster dose is not reported.

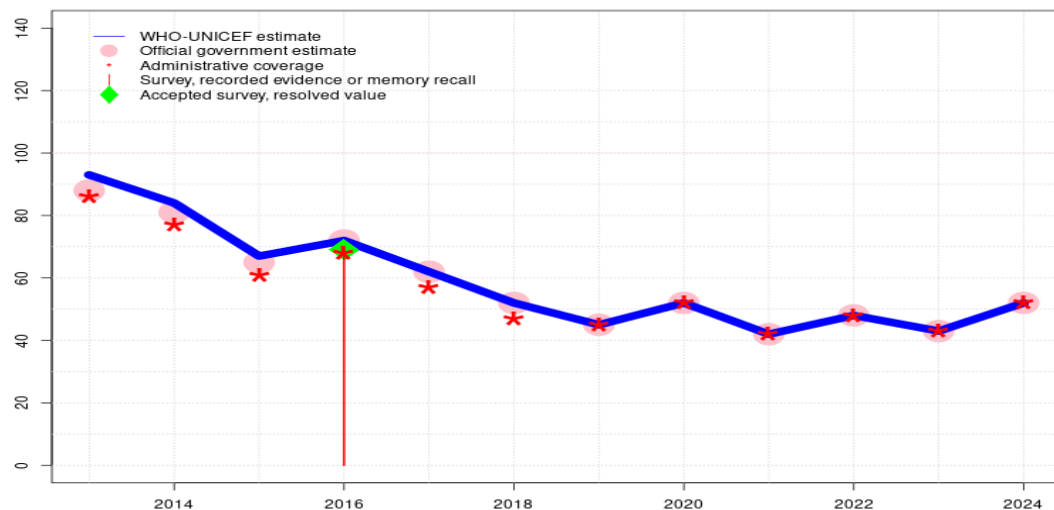
**YFV:** percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

**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.

Disclaimer: All reasonable precautions have been taken by the World Health Organization and United Nations Children's Fund to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization or United Nations Children's Fund be liable for damages arising from its use.

# Papua New Guinea - BCG

PNG - BCG



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 93   | 84   | 67   | 72   | 62   | 52   | 45   | 52   | 42   | 48   | 43   | 52   |
| Estimate GoC   | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    |
| Official       | 88   | 81   | 65   | 72   | 62   | 52   | 45   | 52   | 42   | 48   | 43   | 52   |
| Administrative | 86   | 77   | 61   | 68   | 57   | 47   | 45   | 52   | 42   | 48   | 43   | 52   |
| Survey         | -    | -    | -    | 69   | -    | -    | -    | -    | -    | -    | -    | -    |

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.

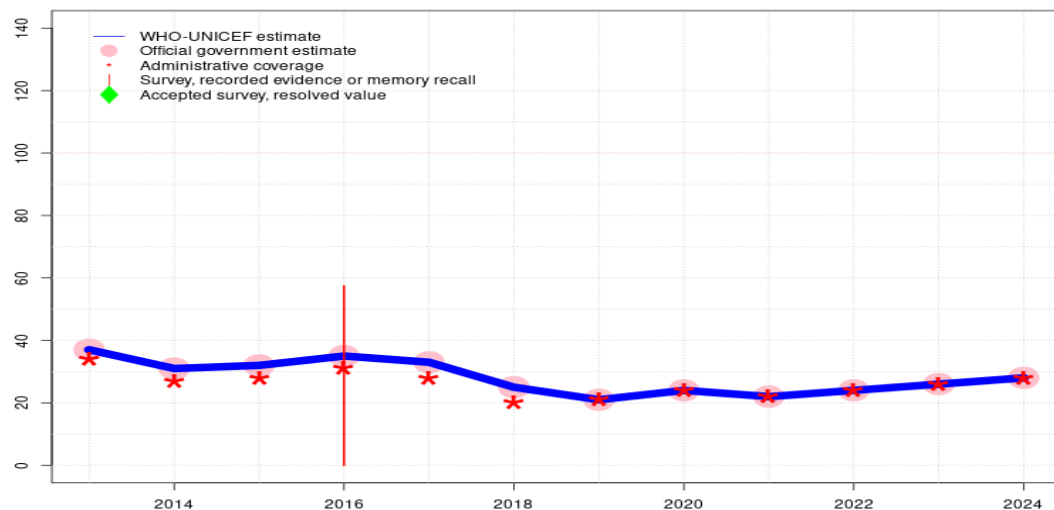
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2024: Estimate informed by reported data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Reported data reflect 94 percent of expected district level reports. Programme reports three months vaccine stockout at national and subnational levels. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Estimate challenged by: D-
- 2019: Estimate informed by reported data. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. GoC=Assigned by working group. Consistency with other antigens.
- 2018: Estimate informed by reported data. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Estimate informed by reported data. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Estimate informed by reported data supported by survey.Survey evidence of 69 percent based on 1 survey(s). Reported data reflects three quarters of expected district-level reports. Programme reports three and one-half months stockout at national level. GoC=Assigned by working group. See comment in 2018.
- 2015: Reported data calibrated to 2005 and 2016 levels. Programme reports three months vaccine stockout at national level. GoC=Assigned by working group. See comment in 2018.
- 2014: Reported data calibrated to 2005 and 2016 levels. Target population increase of 13 percent compared to 2013. Programme reports two months stockout at national level. GoC=Assigned by working group. See comment in 2018.
- 2013: Reported data calibrated to 2005 and 2016 levels. GoC=Assigned by working group. See comment in 2018.

# Papua New Guinea - HEPBB

PNG - HEPBB



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 37   | 31   | 32   | 35   | 33   | 25   | 21   | 24   | 22   | 24   | 26   | 28   |
| Estimate GoC   | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    |
| Official       | 37   | 31   | 32   | 35   | 33   | 25   | 21   | 24   | 22   | 24   | 26   | 28   |
| Administrative | 34   | 27   | 28   | 31   | 28   | 20   | 21   | 24   | 22   | 24   | 26   | 28   |
| Survey         | -    | -    | -    | 58   | -    | -    | -    | -    | -    | -    | -    | -    |

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.

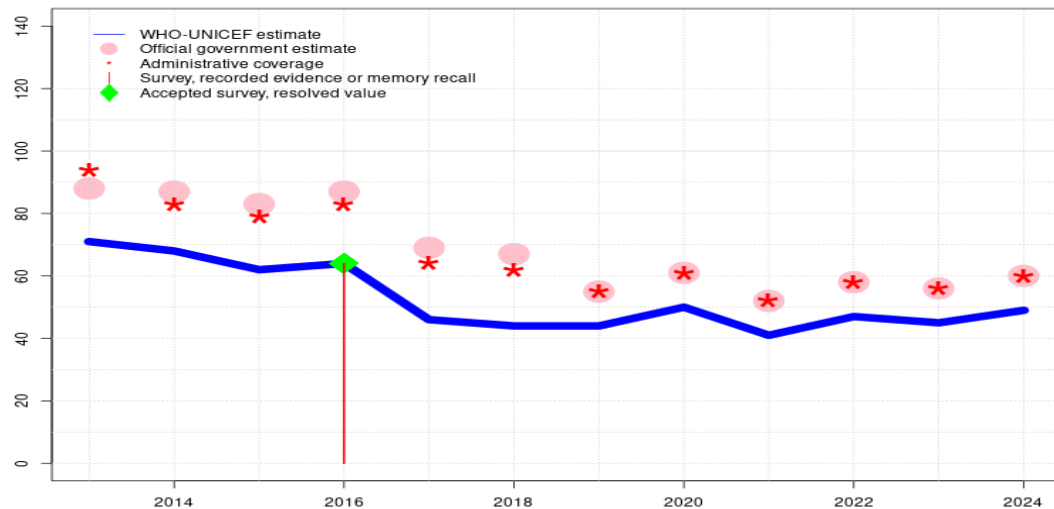
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2024: Estimate informed by reported data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Estimate exceptionally based on reported data. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Reported data reflect 94 percent of expected district level reports. GoC=Assigned by working group. Consistency with GoC for other vaccine-doses.
- 2021: Estimate informed by reported data. GoC=Assigned by working group. Consistency with GoC for other vaccine-doses.
- 2020: Estimate informed by reported data. GoC=Assigned by working group. Consistency with GoC for other vaccine-doses.
- 2019: Estimate informed by reported data. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. GoC=Assigned by working group. Consistency with other antigens.
- 2018: Estimate informed by reported data. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Estimate informed by reported data. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Estimate informed by reported data. Papua New Guinea Demographic and Health Survey 2016-2018 results ignored by working group. Survey results ignored due to insufficient information regarding whether HepB doses were received within 24 hours of birth. Reported data reflects three quarters of expected district-level reports. GoC=Assigned by working group. See comment in 2018.
- 2015: Estimate informed by reported data. GoC=Assigned by working group. See comment in 2018.
- 2014: Estimate informed by reported data. Target population increase of 13 percent compared to 2013. GoC=Assigned by working group. See comment in 2018.
- 2013: Estimate informed by reported data. Programme reports two months stockout at national level. GoC=Assigned by working group. See comment in 2018.

# Papua New Guinea - DTP1

PNG - DTP1



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 71   | 68   | 62   | 64   | 46   | 44   | 44   | 50   | 41   | 47   | 45   | 49   |
| Estimate GoC   | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    |
| Official       | 88   | 87   | 83   | 87   | 69   | 67   | 55   | 61   | 52   | 58   | 56   | 60   |
| Administrative | 94   | 83   | 79   | 83   | 64   | 62   | 55   | 61   | 52   | 58   | 56   | 60   |
| Survey         | -    | -    | -    | 64   | -    | -    | -    | -    | -    | -    | -    | -    |

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.

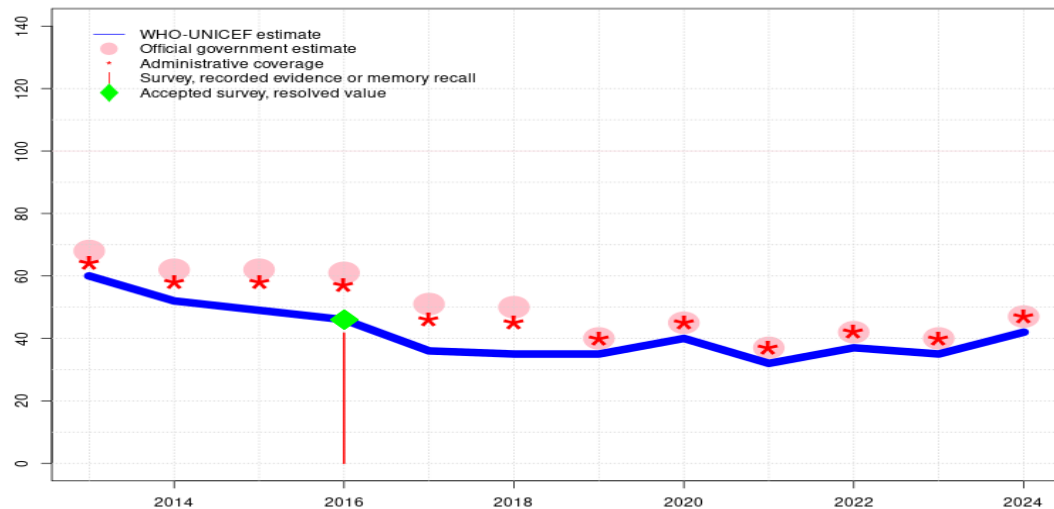
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2024: Reported data calibrated to 2019 levels. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-R-
- 2023: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2022: Reported data calibrated to 2019 levels. Reported data reflect 94 percent of expected district level reports. Estimate challenged by: D-R-
- 2021: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2020: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2019: Estimate of 44 percent assigned by working group. Estimate informed by prior year estimated coverage. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. Estimate challenged by: D-R-
- 2018: Estimate of 44 percent assigned by working group. Based on calibration in relationship with 2016 survey. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Reported data calibrated to 2016 and 2018 levels. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Survey evidence does not support reported data. Estimate based on survey result. Survey evidence of 64 percent based on 1 survey(s). Reported data reflects three quarters of expected district-level reports. GoC=Assigned by working group. See comment in 2018.
- 2015: Reported data calibrated to 2005 and 2016 levels. GoC=Assigned by working group. See comment in 2018.
- 2014: Reported data calibrated to 2005 and 2016 levels. Target population increase of 13 percent compared to 2013. GoC=Assigned by working group. See comment in 2018.
- 2013: Reported data calibrated to 2005 and 2016 levels. GoC=Assigned by working group. See comment in 2018.

# Papua New Guinea - DTP3

PNG - DTP3



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 60   | 52   | 49   | 46   | 36   | 35   | 35   | 40   | 32   | 37   | 35   | 42   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | 68   | 62   | 62   | 61   | 51   | 50   | 40   | 45   | 37   | 42   | 40   | 47   |
| Administrative | 64   | 58   | 58   | 57   | 46   | 45   | 40   | 45   | 37   | 42   | 40   | 47   |
| Survey         | -    | -    | -    | 42   | -    | -    | -    | -    | -    | -    | -    | -    |

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.

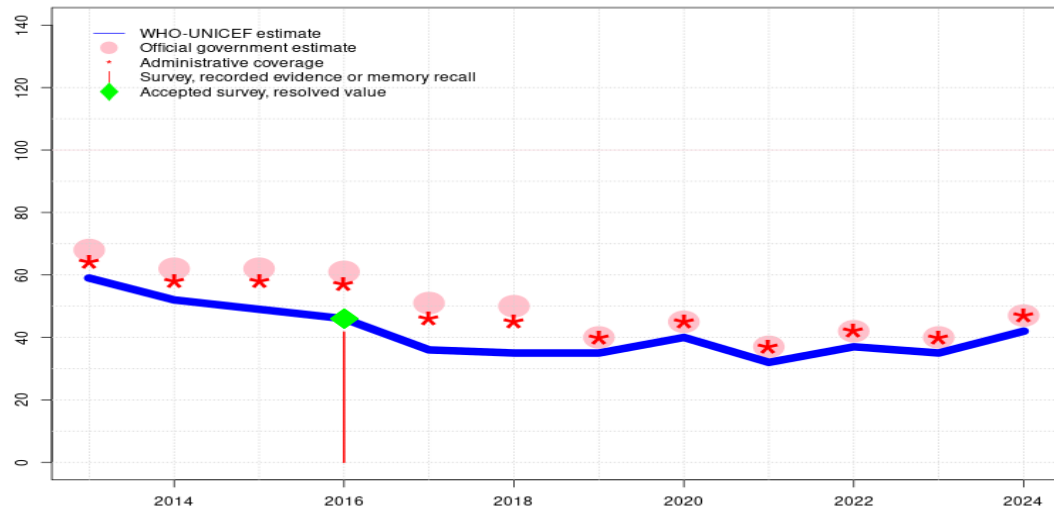
## Description:

- 2024: Reported data calibrated to 2019 levels. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-R-
- 2023: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2022: Reported data calibrated to 2019 levels. Reported data reflect 94 percent of expected district level reports. Estimate challenged by: D-R-
- 2021: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2020: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2019: Estimate of 35 percent assigned by working group. Estimate informed by prior year estimated coverage. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. Estimate challenged by: D-R-
- 2018: Estimate of 35 percent assigned by working group. Based on calibration in relationship with 2016 survey. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Reported data calibrated to 2016 and 2018 levels. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Survey evidence does not support reported data. Estimate based on survey result. Survey evidence of 46 percent based on 1 survey(s). Papua New Guinea Demographic and Health Survey 2016-2018 record or recall results of 42 percent modified for recall bias to 46 percent based on 1st dose record or recall coverage of 64 percent, 1st dose record only coverage of 50 percent and 3rd dose record only coverage of 36 percent. Reported data reflects three quarters of expected district-level reports. GoC=Assigned by working group. See comment in 2018.
- 2015: Reported data calibrated to 2005 and 2016 levels. GoC=Assigned by working group. See comment in 2018.
- 2014: Reported data calibrated to 2005 and 2016 levels. Target population increase of 13 percent compared to 2013. GoC=Assigned by working group. See comment in 2018.
- 2013: Reported data calibrated to 2005 and 2016 levels. GoC=Assigned by working group. See comment in 2018.



# Papua New Guinea - HEPB3

PNG - HEPB3



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 59   | 52   | 49   | 46   | 36   | 35   | 35   | 40   | 32   | 37   | 35   | 42   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | 68   | 62   | 62   | 61   | 51   | 50   | 40   | 45   | 37   | 42   | 40   | 47   |
| Administrative | 64   | 58   | 58   | 57   | 46   | 45   | 40   | 45   | 37   | 42   | 40   | 47   |
| Survey         | -    | -    | -    | 42   | -    | -    | -    | -    | -    | -    | -    | -    |

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.

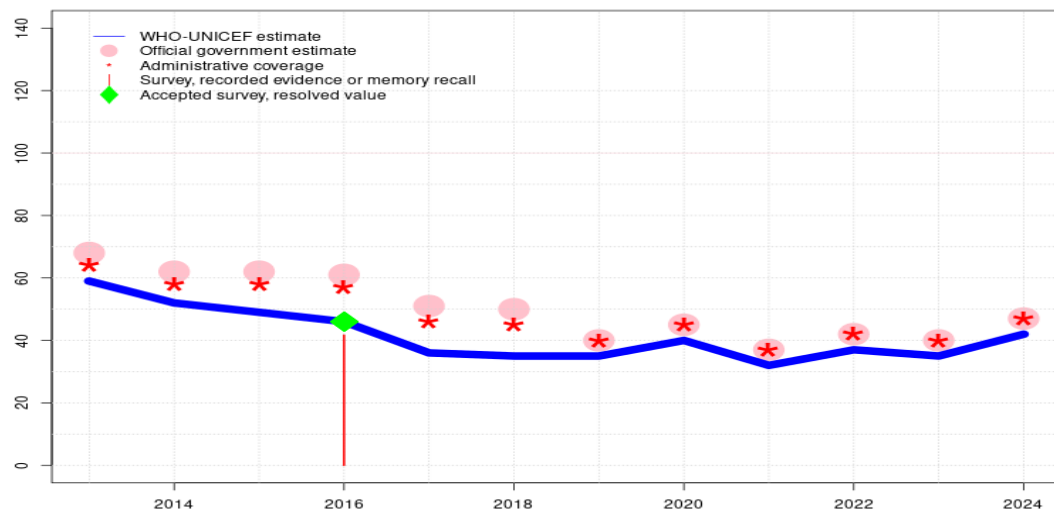
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2024: Reported data calibrated to 2019 levels. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-R-
- 2023: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2022: Reported data calibrated to 2019 levels. Reported data reflect 94 percent of expected district level reports. Estimate challenged by: D-R-
- 2021: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2020: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2019: Estimate of 35 percent assigned by working group. Estimate informed by prior year estimated coverage. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. Estimate challenged by: D-R-
- 2018: Estimate of 35 percent assigned by working group. Based on calibration in relationship with 2016 survey. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Reported data calibrated to 2016 and 2018 levels. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Survey evidence does not support reported data. Estimate based on survey result. Survey evidence of 46 percent based on 1 survey(s). Papua New Guinea Demographic and Health Survey 2016-2018 record or recall results of 42 percent modified for recall bias to 46 percent based on 1st dose record or recall coverage of 64 percent, 1st dose record only coverage of 50 percent and 3rd dose record only coverage of 36 percent. Reported data reflects three quarters of expected district-level reports. GoC=Assigned by working group. See comment in 2018.
- 2015: Reported data calibrated to 2012 and 2016 levels. GoC=Assigned by working group. See comment in 2018.
- 2014: Reported data calibrated to 2012 and 2016 levels. Target population increase of 13 percent compared to 2013. GoC=Assigned by working group. See comment in 2018.
- 2013: Reported data calibrated to 2012 and 2016 levels. GoC=Assigned by working group. See comment in 2018.

# Papua New Guinea - HIB3

PNG - HIB3



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 59   | 52   | 49   | 46   | 36   | 35   | 35   | 40   | 32   | 37   | 35   | 42   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | 68   | 62   | 62   | 61   | 51   | 50   | 40   | 45   | 37   | 42   | 40   | 47   |
| Administrative | 64   | 58   | 58   | 57   | 46   | 45   | 40   | 45   | 37   | 42   | 40   | 47   |
| Survey         | -    | -    | -    | 42   | -    | -    | -    | -    | -    | -    | -    | -    |

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.

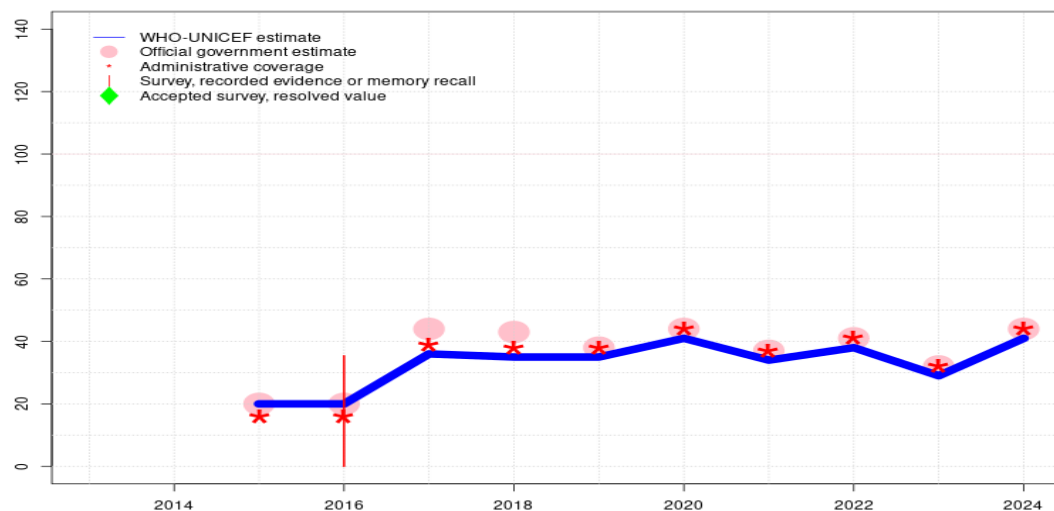
## Description:

- 2024: Reported data calibrated to 2019 levels. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-R-
- 2023: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2022: Reported data calibrated to 2019 levels. Reported data reflect 94 percent of expected district level reports. Estimate challenged by: D-R-
- 2021: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2020: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2019: Estimate of 35 percent assigned by working group. Estimate informed by prior year estimated coverage. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. Estimate challenged by: D-R-
- 2018: Estimate of 35 percent assigned by working group. Based on calibration in relationship with 2016 survey. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Reported data calibrated to 2016 and 2018 levels. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Survey evidence does not support reported data. Estimate based on survey result. Survey evidence of 46 percent based on 1 survey(s). Papua New Guinea Demographic and Health Survey 2016-2018 record or recall results of 42 percent modified for recall bias to 46 percent based on 1st dose record or recall coverage of 64 percent, 1st dose record only coverage of 50 percent and 3rd dose record only coverage of 36 percent. Reported data reflects three quarters of expected district-level reports. GoC=Assigned by working group. See comment in 2018.
- 2015: Reported data calibrated to 2012 and 2016 levels. GoC=Assigned by working group. See comment in 2018.
- 2014: Reported data calibrated to 2012 and 2016 levels. Target population increase of 13 percent compared to 2013. GoC=Assigned by working group. See comment in 2018.
- 2013: Reported data calibrated to 2012 and 2016 levels. GoC=Assigned by working group. See comment in 2018.



# Papua New Guinea - PCV3

PNG - PCV3



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | -    | -    | 20   | 20   | 36   | 35   | 35   | 41   | 34   | 38   | 29   | 41   |
| Estimate GoC   | -    | -    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | -    | -    | 20   | 20   | 44   | 43   | 38   | 44   | 37   | 41   | 32   | 44   |
| Administrative | -    | -    | 16   | 16   | 39   | 38   | 38   | 44   | 37   | 41   | 32   | 44   |
| Survey         | -    | -    | -    | 35   | -    | -    | -    | -    | -    | -    | -    | -    |

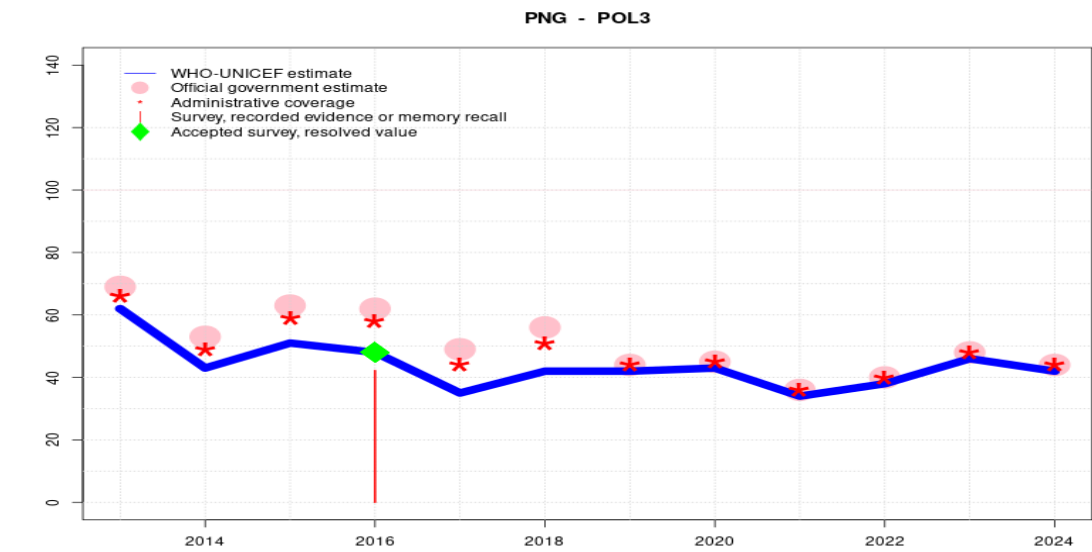
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- 2024: Reported data calibrated to 2019 levels. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Programme reports a two months stockouts at national and subnational levels. Estimate challenged by: D-R-
- 2023: Reported data calibrated to 2019 levels. Programme reports a two-month vaccine stockout at national and subnational levels. Estimate challenged by: D-R-
- 2022: Reported data calibrated to 2019 levels. Reported data reflect 94 percent of expected district level reports. Programme reports three months vaccine stockout at national and subnational levels. Estimate challenged by: D-R-
- 2021: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2020: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2019: Estimate of 35 percent assigned by working group. Estimate informed by estimated DTP3 coverage for consistency. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. Estimate challenged by: R-
- 2018: Estimate of 35 percent assigned by working group. Estimate informed by estimated DTP3 coverage. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. Estimate informed by reported data during period of introduction. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Estimate of 36 percent assigned by working group. Estimate informed by estimated DTP3 coverage. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Estimate informed by reported data during period of introduction. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Estimate informed by reported data. Papua New Guinea Demographic and Health Survey 2016-2018 results ignored by working group. Survey results ignored during period of introduction. Papua New Guinea Demographic and Health Survey 2016-2018 record or recall results of 35 percent modified for recall bias to 39 percent based on 1st dose record or recall coverage of 58 percent, 1st dose record only coverage of 46 percent and 3rd dose record only coverage of 31 percent. Reported data reflects three quarters of expected district-level reports. Estimate informed by reported data during period of introduction. GoC=Assigned by working group. See comment in 2018.
- 2015: Estimate informed by reported data. Pneumococcal conjugate vaccine introduced in 2013. Reporting started in 2015. GoC=Assigned by working group. See comment in 2018.



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 62   | 43   | 51   | 48   | 35   | 42   | 42   | 43   | 34   | 38   | 46   | 42   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | 69   | 53   | 63   | 62   | 49   | 56   | 44   | 45   | 36   | 40   | 48   | 44   |
| Administrative | 66   | 49   | 59   | 58   | 44   | 51   | 44   | 45   | 36   | 40   | 48   | 44   |
| Survey         | -    | -    | -    | 42   | -    | -    | -    | -    | -    | -    | -    | -    |

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.

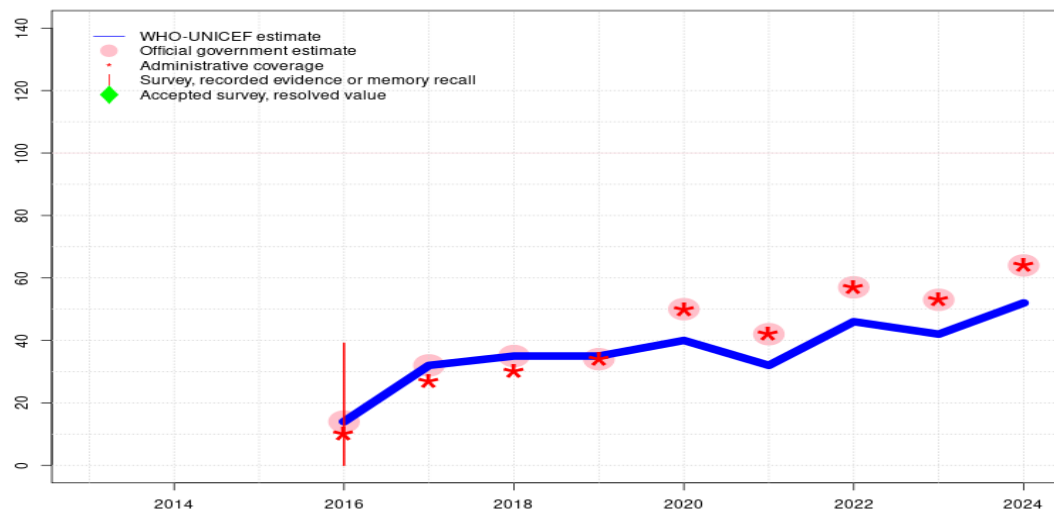
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2024: Reported data calibrated to 2019 levels. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-R-
- 2023: Reported data calibrated to 2019 levels. Reported coverage likely includes campaign doses. Programme reports a five-month vaccine stockout at national and subnational levels. Estimate challenged by: D-R-
- 2022: Reported data calibrated to 2019 levels. Reported data reflect 94 percent of expected district level reports. Estimate challenged by: D-R-
- 2021: Reported data calibrated to 2019 levels. Estimate challenged by: D-R-
- 2020: Reported data calibrated to 2019 levels. Programme reports half month vaccine stockout at national and district level. Estimate challenged by: D-R-
- 2019: Estimate of 42 percent assigned by working group. Estimate informed by prior year estimated coverage. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. Estimate challenged by: R-
- 2018: Estimate of 42 percent assigned by working group. Based on calibration in relationship with 2016 survey. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Reported data calibrated to 2016 and 2018 levels. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Survey evidence does not support reported data. Estimate based on survey result. Survey evidence of 48 percent based on 1 survey(s). Papua New Guinea Demographic and Health Survey 2016-2018 record or recall results of 42 percent modified for recall bias to 48 percent based on 1st dose record or recall coverage of 69 percent, 1st dose record only coverage of 52 percent and 3rd dose record only coverage of 36 percent. Reported data reflects three quarters of expected district-level reports. GoC=Assigned by working group. See comment in 2018.
- 2015: Reported data calibrated to 2005 and 2016 levels. GoC=Assigned by working group. See comment in 2018.
- 2014: Reported data calibrated to 2005 and 2016 levels. Target population increase of 13 percent compared to 2013. Programme reports two months stockout at national level. GoC=Assigned by working group. See comment in 2018.
- 2013: Reported data calibrated to 2005 and 2016 levels. Programme reports three months vaccine stockout at national level. GoC=Assigned by working group. See comment in 2018.

# Papua New Guinea - IPV1

PNG - IPV1



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | -    | -    | -    | 14   | 32   | 35   | 35   | 40   | 32   | 46   | 42   | 52   |
| Estimate GoC   | -    | -    | -    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    |
| Official       | -    | -    | -    | 14   | 32   | 35   | 34   | 50   | 42   | 57   | 53   | 64   |
| Administrative | -    | -    | -    | 10   | 27   | 30   | 34   | 50   | 42   | 57   | 53   | 64   |
| Survey         | -    | -    | -    | 39   | -    | -    | -    | -    | -    | -    | -    | -    |

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:

- 2024: Estimate is informed by the relative relationship between reported administrative coverage and estimated coverage for DTP1 applied to reported administrative coverage for IPV1. During 2024, the reported number of doses administered for IPV1, recommended at 3 months of age, was more similar to that for DTP1 than for DTP3. Reported data excluded due to sudden change in coverage from 53 to 64 percent. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-R-
- 2023: Estimate is informed by the relative relationship between reported administrative coverage and estimated coverage for DTP1 applied to reported administrative coverage for IPV1. During 2023, the reported number of doses administered for IPV1, recommended at 3 months of age, was more similar to that for DTP1 than for DTP3. Estimate challenged by: D-R-
- 2022: Estimate is informed by the relative relationship between reported administrative coverage and estimated coverage for DTP1 applied to reported administrative coverage for IPV1. During 2022, the reported number of doses administered for IPV1, recommended at 3 months of age, was more similar to that for DTP1 than for DTP3. Reported data reflect 94 percent of expected district level reports. Estimate challenged by: D-R-
- 2021: Estimate informed by DTP3 estimated coverage. Estimate reflects decline in reported coverage from 2020. Estimate challenged by: D-R-
- 2020: Estimate informed by estimated DTP3 coverage for consistency but it may underestimate IPV1 coverage given that more IPV than DTP3 doses reported. Estimate challenged by: D-R-
- 2019: Estimate of 35 percent assigned by working group. Estimate informed by estimated DTP3 coverage. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. Actual IPV1 coverage is likely lower than that estimated based on reported doses administered vis-a-vis the third dose of DTP. GoC=Assigned by working group. Consistency with other antigens recommended at the same age.
- 2018: Estimate informed by estimated DTP3 coverage. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. Estimate informed by reported data during period of introduction. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Estimate informed by reported data. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Estimate informed by reported data during period of introduction. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Estimate informed by reported data. Papua New Guinea Demographic and Health Survey 2016-2018 results ignored by working group. Survey results ignored during period

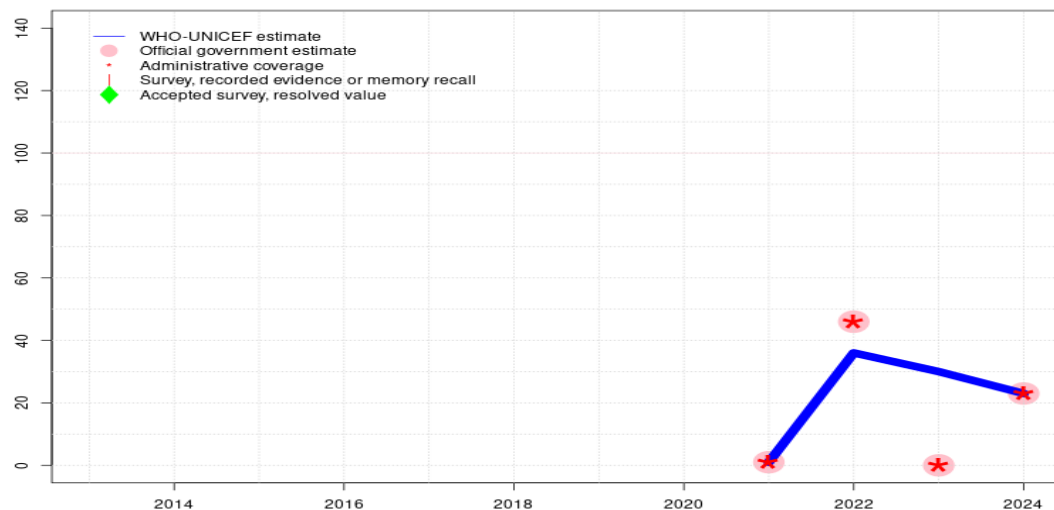
# Papua New Guinea - IPV1

---

of introduction. Reported data reflects three quarters of expected district-level reports. Inactivated polio vaccine introduced in 2015, reporting starts in 2016. Unclear whether doses given as part of an intensification of routine vaccination are included in the reported coverage. Programme reports two months stockout of IPV at national level. GoC=Assigned by working group. See comment in 2018.

# Papua New Guinea - IPV2

PNG - IPV2



## Description:

- 2024: Estimate informed by reported data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: IPV2 not yet included in PNG National Health Information system. 10 percent of health facilities reported data for 2023. Estimate of 30 percent changed from previous revision value of 36 percent. Estimate challenged by: D-R-
- 2022: Estimate informed by relative relationship between estimated and reported coverage for IPV1 applied to reported coverage for IPV2. Reported data reflect 94 percent of expected district level reports. Estimate challenged by: D-R-
- 2021: Estimate informed by reported data. Second dose of inactivated polio vaccine introduced in 2021. GoC=R+ D+

|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | -    | -    | -    | -    | -    | -    | -    | -    | 1    | 36   | 30   | 23   |
| Estimate GoC   | -    | -    | -    | -    | -    | -    | -    | -    | ••   | •    | •    | ••   |
| Official       | -    | -    | -    | -    | -    | -    | -    | -    | 1    | 46   | 0    | 23   |
| Administrative | -    | -    | -    | -    | -    | -    | -    | -    | 1    | 46   | 0    | 23   |
| Survey         | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |

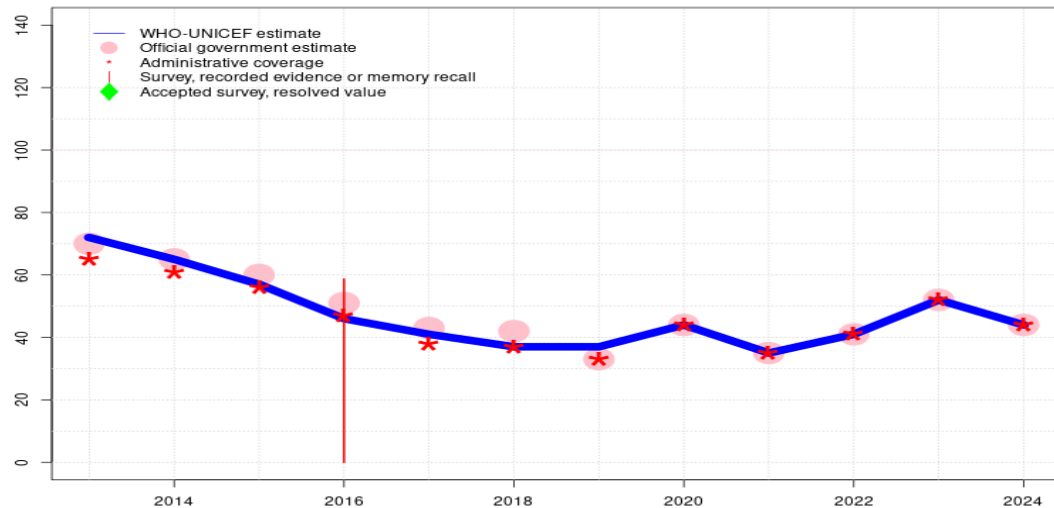
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

# Papua New Guinea - MCV1

PNG - MCV1



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 72   | 65   | 57   | 46   | 41   | 37   | 37   | 44   | 35   | 41   | 52   | 44   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | ••   | ••   | •    | •    | •    |
| Official       | 70   | 65   | 60   | 51   | 43   | 42   | 33   | 44   | 35   | 41   | 52   | 44   |
| Administrative | 65   | 61   | 56   | 47   | 38   | 37   | 33   | 44   | 35   | 41   | 52   | 44   |
| Survey         | -    | -    | -    | 59   | -    | -    | -    | -    | -    | -    | -    | -    |

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.

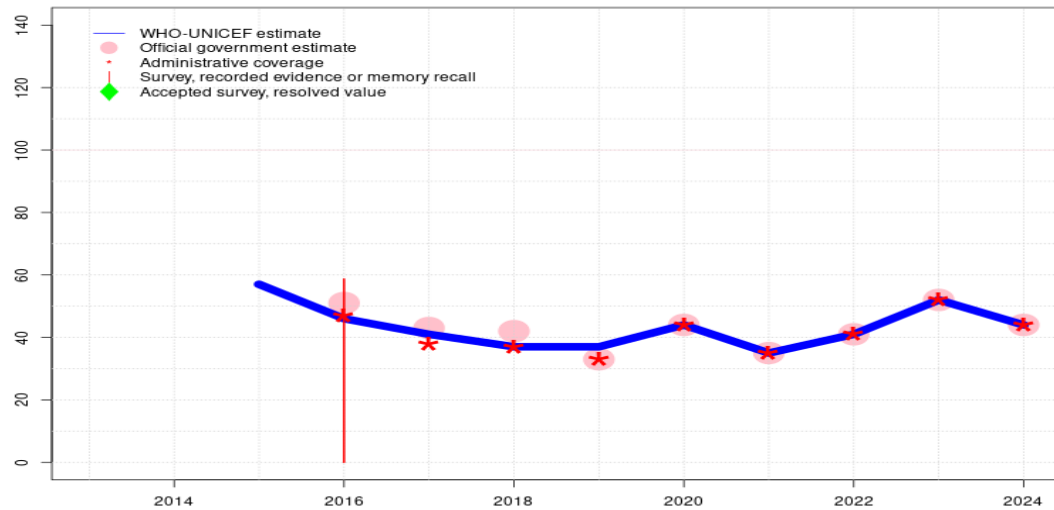
## Description:

- 2024: Estimate informed by reported data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-
- 2023: Estimate informed by reported data. Reported coverage likely includes campaign doses. Programme reports a one month vaccine stockout at national level. Estimate challenged by: D-
- 2022: Estimate informed by reported data. Reported data reflect 94 percent of expected district level reports. Estimate challenged by: D-
- 2021: Estimate informed by reported data. GoC=R+ D+
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by prior year estimated coverage. Observed decline in reported coverage for several antigens appears to reflect unexplained seven percent increase in target population. Year to year population growth was previously around three percent. Estimate challenged by: R-
- 2018: Based on calibration in relationship with 2016 survey. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Reported data calibrated to 2016 and 2018 levels. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Estimate of 46 percent assigned by working group. Estimate informed by estimated DTP3 coverage. Reported administrative data suggests MCV1 coverage is lower than that for DTP3. Papua New Guinea Demographic and Health Survey 2016-2018 results ignored by working group. Survey results may included doses delivered through campaign. Reported data reflects three quarters of expected district-level reports. GoC=Assigned by working group. See comment in 2018.
- 2015: Reported data calibrated to 2005 and 2016 levels. GoC=Assigned by working group. See comment in 2018.
- 2014: Reported data calibrated to 2005 and 2016 levels. Target population increase of 13 percent compared to 2013. Programme reports two months stockout at national level. GoC=Assigned by working group. See comment in 2018.
- 2013: Reported data calibrated to 2005 and 2016 levels. GoC=Assigned by working group. See comment in 2018.



# Papua New Guinea - RCV1

PNG - RCV1



|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | -    | -    | 57   | 46   | 41   | 37   | 37   | 44   | 35   | 41   | 52   | 44   |
| Estimate GoC   | -    | -    | ●    | ●    | ●    | ●    | ●    | ●●   | ●●   | ●    | ●    | ●    |
| Official       | -    | -    | -    | 51   | 43   | 42   | 33   | 44   | 35   | 41   | 52   | 44   |
| Administrative | -    | -    | -    | 47   | 38   | 37   | 33   | 44   | 35   | 41   | 52   | 44   |
| Survey         | -    | -    | -    | 59   | -    | -    | -    | -    | -    | -    | -    | -    |

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.

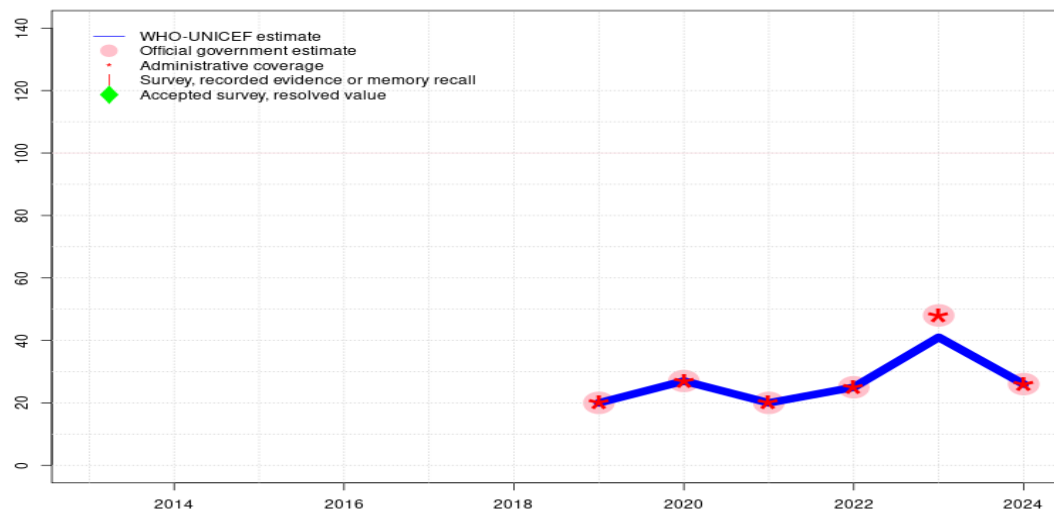
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2024: Estimate based on estimated MCV1. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. Estimate challenged by: D-
- 2023: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2022: Estimate based on estimated MCV1. Reported data reflect 94 percent of expected district level reports. Estimate challenged by: D-
- 2021: Estimate based on estimated MCV1. GoC=R+ D+
- 2020: Estimate based on estimated MCV1. GoC=R+ D+
- 2019: Estimate informed by estimated MCV1 coverage level. Estimate challenged by: R-
- 2018: Estimate based on estimated MCV1. Programme reports do not include private sector providers. Programme notes administrative reporting completeness is 78 percent. GoC=Assigned by working group. Fluctuation in reported coverage across the time series suggests challenges in routine monitoring system.
- 2017: Estimate based on estimated MCV1. Programme reports that persistent challenges contributed to the declines in coverage for 2017. Consistent decline in reported coverage for almost all vaccines. GoC=Assigned by working group. See comment in 2018.
- 2016: Estimate based on estimated MCV1. Papua New Guinea Demographic and Health Survey 2016-2018 results ignored by working group. Survey results may included doses delivered through campaign. Reported data reflects three quarters of expected district-level reports. GoC=Assigned by working group. See comment in 2018.
- 2015: Estimate based on estimated MCV1. GoC=Assigned by working group. See comment in 2018.

# Papua New Guinea - MCV2

PNG - MCV2



## Description:

- 2024: Estimate informed by reported data. No nationally representative household survey for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality survey to verify reported levels of coverage. GoC=R+ D+
- 2023: Reported coverage likely includes campaign doses. Programme reports a one month vaccine stockout at national level. Estimate informed by the relationship between reported MCV1 and MCV2 doses applied to the estimated MCV1 coverage. Reported data excluded due to an increase from 25 percent to 48 percent with decrease to 26 percent. Estimate challenged by: D-R-
- 2022: Estimate informed by reported data. Reported data reflect 94 percent of expected district level reports. GoC=Assigned by working group. Consistency with other antigens recommended at the same age.
- 2021: Estimate informed by reported data. GoC=Assigned by working group. Consistency with other antigens recommended at the same age.
- 2020: Estimate informed by reported data. GoC=Assigned by working group. Consistency with other antigens recommended at the same age.
- 2019: Estimate informed by reported data. Estimate informed by reported data on an exceptional basis relative to other antigens. GoC=Assigned by working group. Consistency with other antigens recommended at the same age.

|                | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | -    | -    | -    | -    | -    | -    | 20   | 27   | 20   | 25   | 41   | 26   |
| Estimate GoC   | -    | -    | -    | -    | -    | -    | ●    | ●    | ●    | ●    | ●    | ●●   |
| Official       | -    | -    | -    | -    | -    | -    | 20   | 27   | 20   | 25   | 48   | 26   |
| Administrative | -    | -    | -    | -    | -    | -    | 20   | 27   | 20   | 25   | 48   | 26   |
| 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.

# Papua New Guinea - 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.

## 2016 Papua New Guinea Demographic and Health Survey 2016-2018

| Vaccine | Confirmation method  | Coverage | Age cohort | Sample | Evidence seen |
|---------|----------------------|----------|------------|--------|---------------|
| BCG     | Recall               | 16.5     | 12-23 m    | 695    | 61            |
| BCG     | Record               | 52.9     | 12-23 m    | 1069   | 61            |
| BCG     | Record or Recall     | 69.4     | 12-23 m    | 1763   | 61            |
| BCG     | Record or Recall<12m | 67.1     | 12-23 m    | 1763   | 61            |
| DTP1    | Recall               | 13.9     | 12-23 m    | 695    | 61            |
| DTP1    | Record               | 50       | 12-23 m    | 1069   | 61            |
| DTP1    | Record or Recall     | 63.9     | 12-23 m    | 1763   | 61            |
| DTP1    | Record or Recall<12m | 60.9     | 12-23 m    | 1763   | 61            |
| DTP3    | Recall               | 5.8      | 12-23 m    | 695    | 61            |
| DTP3    | Record               | 35.9     | 12-23 m    | 1069   | 61            |
| DTP3    | Record or Recall     | 41.7     | 12-23 m    | 1763   | 61            |
| DTP3    | Record or Recall<12m | 35       | 12-23 m    | 1763   | 61            |
| HEPB1   | Recall               | 13.9     | 12-23 m    | 695    | 61            |
| HEPB1   | Record               | 50       | 12-23 m    | 1069   | 61            |
| HEPB1   | Record or Recall     | 63.9     | 12-23 m    | 1763   | 61            |
| HEPB1   | Record or Recall<12m | 60.9     | 12-23 m    | 1763   | 61            |
| HEPB3   | Recall               | 5.8      | 12-23 m    | 695    | 61            |
| HEPB3   | Record               | 35.9     | 12-23 m    | 1069   | 61            |
| HEPB3   | Record or Recall     | 41.7     | 12-23 m    | 1763   | 61            |

|       |                      |      |         |      |    |
|-------|----------------------|------|---------|------|----|
| HEPB3 | Record or Recall<12m | 35   | 12-23 m | 1763 | 61 |
| HEPBB | Recall               | 14.2 | 12-23 m | 695  | 61 |
| HEPBB | Record               | 43.3 | 12-23 m | 1069 | 61 |
| HEPBB | Record or Recall     | 57.5 | 12-23 m | 1763 | 61 |
| HEPBB | Record or Recall<12m | 55.5 | 12-23 m | 1763 | 61 |
| HIB1  | Recall               | 13.9 | 12-23 m | 695  | 61 |
| HIB1  | Record               | 50   | 12-23 m | 1069 | 61 |
| HIB1  | Record or Recall     | 63.9 | 12-23 m | 1763 | 61 |
| HIB1  | Record or Recall<12m | 60.9 | 12-23 m | 1763 | 61 |
| HIB3  | Recall               | 5.8  | 12-23 m | 695  | 61 |
| HIB3  | Record               | 35.9 | 12-23 m | 1069 | 61 |
| HIB3  | Record or Recall     | 41.7 | 12-23 m | 1763 | 61 |
| HIB3  | Record or Recall<12m | 35   | 12-23 m | 1763 | 61 |
| IPV1  | Recall               | 12.7 | 12-23 m | 695  | 61 |
| IPV1  | Record               | 26.4 | 12-23 m | 1069 | 61 |
| IPV1  | Record or Recall     | 39.1 | 12-23 m | 1763 | 61 |
| IPV1  | Record or Recall<12m | 33.4 | 12-23 m | 1763 | 61 |
| MCV1  | Recall               | 13.2 | 12-23 m | 695  | 61 |
| MCV1  | Record               | 45.5 | 12-23 m | 1069 | 61 |
| MCV1  | Record or Recall     | 58.7 | 12-23 m | 1763 | 61 |
| MCV1  | Record or Recall<12m | 50.1 | 12-23 m | 1763 | 61 |
| PCV1  | Recall               | 12   | 12-23 m | 695  | 61 |
| PCV1  | Record               | 46.3 | 12-23 m | 1069 | 61 |
| PCV1  | Record or Recall     | 58.3 | 12-23 m | 1763 | 61 |
| PCV1  | Record or Recall<12m | 54.2 | 12-23 m | 1763 | 61 |
| PCV3  | Recall               | 4    | 12-23 m | 695  | 61 |
| PCV3  | Record               | 31.3 | 12-23 m | 1069 | 61 |
| PCV3  | Record or Recall     | 35.4 | 12-23 m | 1763 | 61 |
| PCV3  | Record or Recall<12m | 28.7 | 12-23 m | 1763 | 61 |
| POL1  | Recall               | 16.9 | 12-23 m | 695  | 61 |
| POL1  | Record               | 52.1 | 12-23 m | 1069 | 61 |
| POL1  | Record or Recall     | 69   | 12-23 m | 1763 | 61 |
| POL1  | Record or Recall<12m | 66   | 12-23 m | 1763 | 61 |
| POL3  | Recall               | 6    | 12-23 m | 695  | 61 |
| POL3  | Record               | 36.2 | 12-23 m | 1069 | 61 |
| POL3  | Record or Recall     | 42.2 | 12-23 m | 1763 | 61 |
| POL3  | Record or Recall<12m | 35.9 | 12-23 m | 1763 | 61 |
| RCV1  | Recall               | 13.2 | 12-23 m | 695  | 61 |
| RCV1  | Record               | 45.5 | 12-23 m | 1069 | 61 |
| RCV1  | Record or Recall     | 58.7 | 12-23 m | 1763 | 61 |

|      |                      |      |         |      |    |
|------|----------------------|------|---------|------|----|
| RCV1 | Record or Recall<12m | 50.1 | 12-23 m | 1763 | 61 |
|------|----------------------|------|---------|------|----|

2005 Papua New Guinea Demographic and Health Survey 2006

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Evidence seen |
|---------|---------------------|----------|------------|--------|---------------|
| BCG     | Record              | 66.7     | 12-23 m    | 883    | 70            |
| BCG     | Record or Recall    | 89.6     | 12-23 m    | 1254   | 70            |
| DTP1    | Record              | 66.5     | 12-23 m    | 883    | 70            |
| DTP1    | Record or Recall    | 87.9     | 12-23 m    | 1254   | 70            |
| DTP3    | Record              | 53.7     | 12-23 m    | 883    | 70            |
| DTP3    | Record or Recall    | 66.8     | 12-23 m    | 1254   | 70            |
| HEPB1   | Record              | 64.8     | 12-23 m    | 883    | 70            |
| HEPB1   | Record or Recall    | 86.4     | 12-23 m    | 1254   | 70            |
| HEPB3   | Record              | 53.3     | 12-23 m    | 883    | 70            |
| HEPB3   | Record or Recall    | 64.6     | 12-23 m    | 1254   | 70            |
| MCV1    | Record              | 61.6     | 12-23 m    | 883    | 70            |
| MCV1    | Record or Recall    | 81.6     | 12-23 m    | 1254   | 70            |
| POL1    | Record              | 64.9     | 12-23 m    | 883    | 70            |
| POL1    | Record or Recall    | 87.4     | 12-23 m    | 1254   | 70            |
| POL3    | Record              | 54.6     | 12-23 m    | 883    | 70            |
| POL3    | Record or Recall    | 68.3     | 12-23 m    | 1254   | 70            |

2004 National Immunization Coverage Survey 2005-2006, Papua New Guinea

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

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Evidence seen |
|---------|---------------------|----------|------------|--------|---------------|
| BCG     | Recall              | 9        | 12-23 m    | 783    | 93            |
| BCG     | Record              | 81.3     | 12-23 m    | 783    | 93            |
| BCG     | Record or Recall    | 90.3     | 12-23 m    | 783    | 93            |
| DTP1    | Recall              | 5.7      | 12-23 m    | 776    | 93            |
| DTP1    | Record              | 81.8     | 12-23 m    | 776    | 93            |
| DTP1    | Record or Recall    | 87.5     | 12-23 m    | 776    | 93            |
| DTP3    | Recall              | 4.2      | 12-23 m    | 783    | 93            |
| DTP3    | Record              | 66.8     | 12-23 m    | 783    | 93            |
| DTP3    | Record or Recall    | 71       | 12-23 m    | 783    | 93            |
| HEPB1   | Recall              | 6        | 12-23 m    | 774    | 93            |
| HEPB1   | Record              | 82.1     | 12-23 m    | 774    | 93            |
| HEPB1   | Record or Recall    | 88.1     | 12-23 m    | 774    | 93            |
| HEPB3   | Recall              | 4.4      | 12-23 m    | 774    | 93            |
| HEPB3   | Record              | 68.7     | 12-23 m    | 774    | 93            |
| HEPB3   | Record or Recall    | 73.1     | 12-23 m    | 774    | 93            |
| MCV1    | Recall              | 6        | 12-23 m    | 776    | 93            |
| MCV1    | Record              | 71.9     | 12-23 m    | 776    | 93            |
| MCV1    | Record or Recall    | 77.9     | 12-23 m    | 776    | 93            |
| POL1    | Recall              | 5.3      | 12-23 m    | 774    | 93            |
| POL1    | Record              | 79.3     | 12-23 m    | 774    | 93            |
| POL1    | Record or Recall    | 84.6     | 12-23 m    | 774    | 93            |
| POL3    | Recall              | 4.7      | 12-23 m    | 776    | 93            |
| POL3    | Record              | 64       | 12-23 m    | 776    | 93            |
| POL3    | Record or Recall    | 68.7     | 12-23 m    | 776    | 93            |