

# Malaysia: WHO and UNICEF estimates of immunization coverage: 2024 revision

**BACKGROUND NOTE** Each year WHO and UNICEF jointly review reports submitted by Member States regarding national immunization coverage, finalized survey reports as well as data from 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.

**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.

**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.

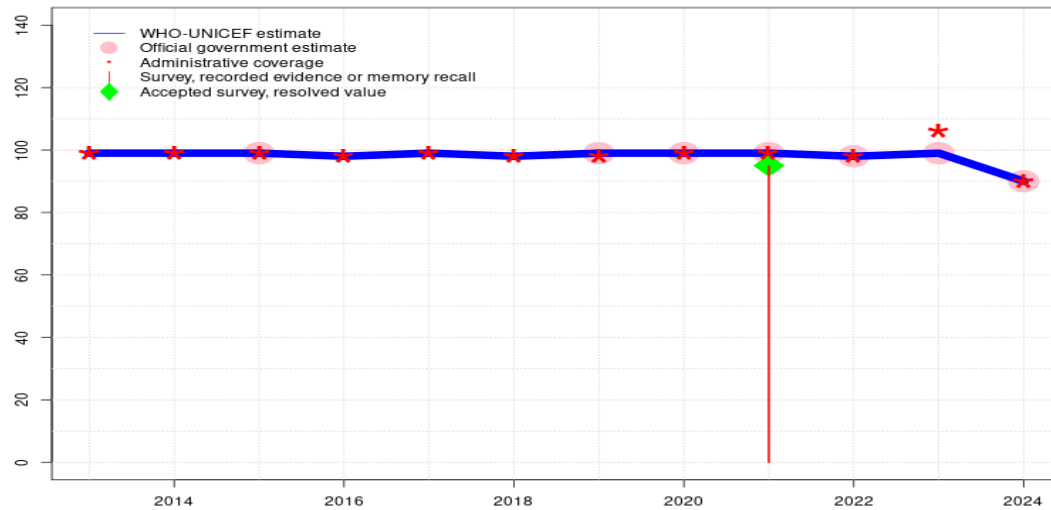
**YFV:** percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

**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.

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# Malaysia - BCG

MYS - BCG



Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by reported data. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. GoC=R+ S+ D+
- 2022: Estimate informed by reported data. GoC=R+ S+ D+
- 2021: Estimate informed by reported data supported by survey. Survey evidence of 95 percent based on 1 survey(s). Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. GoC=R+ S+ D+
- 2020: Estimate informed by reported data. GoC=R+ S+ D+
- 2019: Estimate informed by reported data. GoC=R+ S+ D+
- 2018: Estimate informed by reported administrative data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Results from the National Health and Morbidity Survey conducted in 2016 among children aged 12-23 months, reflecting coverage for the 2014 birth cohort, support reported coverage. GoC=R+ D+
- 2013: Estimate informed by reported administrative data. GoC=R+ D+

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	99	99	99	98	99	98	99	99	99	98	99	90
Estimate GoC	●●	●●	●●	●●	●●	●●	●●●	●●●	●●●	●●●	●●●	●●
Official	-	-	99	-	-	-	99	99	99	98	99	90
Administrative	99	99	99	98	99	98	98	99	99	98	106	90
Survey	-	-	-	-	-	-	-	-	95	-	-	-

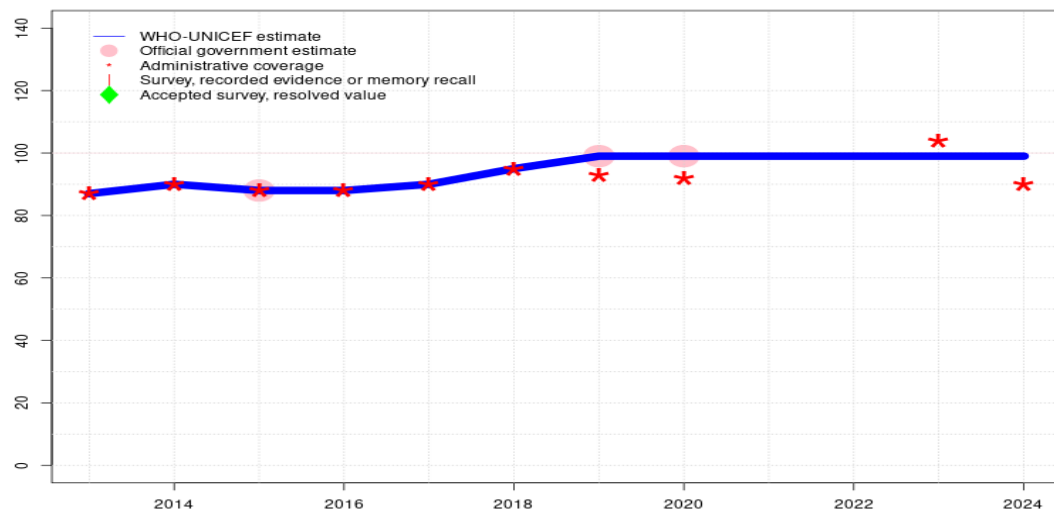
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

# Malaysia - HEPBB

MYS - HEPBB



## Description:

- 2024: Estimate informed by extrapolation from reported data. Reported data excluded due to sudden change in coverage from 104 to 90 percent. GoC=R+ D+
- 2023: Estimate informed by extrapolation from reported data. Reported data excluded because 104 percent greater than 100 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. GoC=R+ D+
- 2022: Estimate informed by extrapolation from reported data. GoC=No accepted empirical data
- 2021: Estimate informed by extrapolation from reported data. Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. GoC=No accepted empirical data
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported administrative data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. GoC=R+ D+
- 2013: Estimate informed by reported administrative data. GoC=R+ D+

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	87	90	88	88	90	95	99	99	99	99	99	99
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●	●	●●	●●
Official	-	-	88	-	-	-	99	99	-	-	-	-
Administrative	87	90	88	88	90	95	93	92	-	-	104	90
Survey	-	-	-	-	-	-	-	-	-	-	-	-

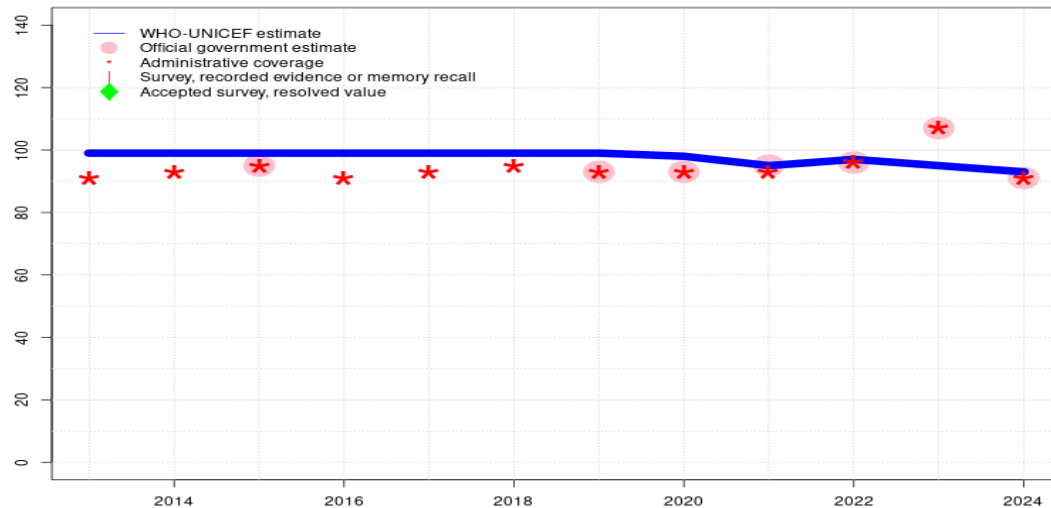
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

# Malaysia - DTP1

MYS - DTP1



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	99	99	99	99	99	99	99	98	95	97	95	93
Estimate GoC	●	●	●	●	●	●	●	●	●●	●	●	●
Official	-	-	95	-	-	-	93	93	95	96	107	91
Administrative	91	93	95	91	93	95	93	93	93	96	107	91
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.

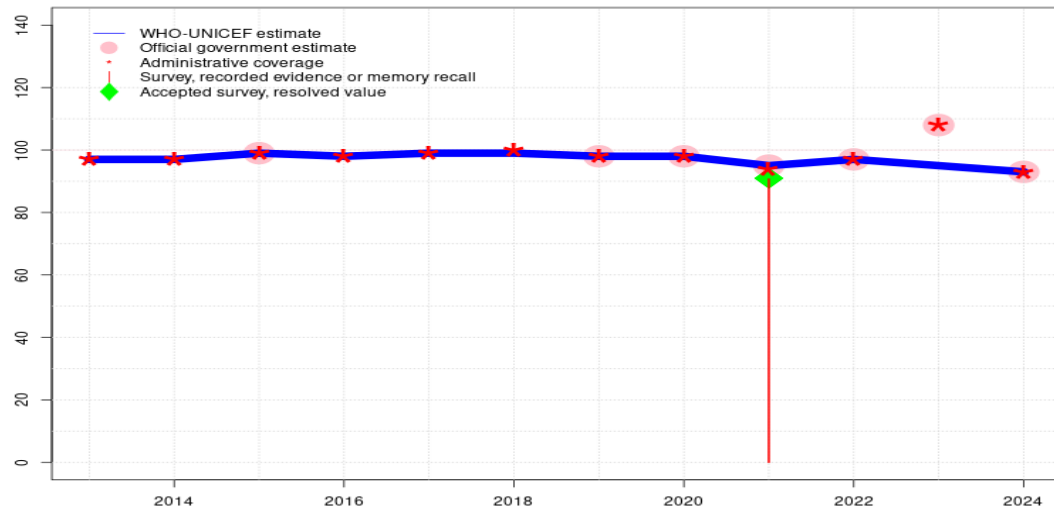
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2024: Estimate based on DTP3 coverage of 93. Estimate challenged by: R-
- 2023: Estimate based on DTP3 coverage of 95. Reported data excluded because 107 percent greater than 100 percent. Reported data excluded due to an increase from 96 percent to 107 percent with decrease to 91 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. Estimate of 95 percent changed from previous revision value of 99 percent. Estimate challenged by: R-
- 2022: Estimate based on DTP3 coverage of 97. Estimate of 97 percent changed from previous revision value of 99 percent. Estimate challenged by: R-
- 2021: Estimate informed by reported data. Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. Estimate of 95 percent changed from previous revision value of 98 percent. GoC=R+ D+
- 2020: Estimate based on DTP3 coverage of 98. Estimate of 98 percent changed from previous revision value of 99 percent. Estimate challenged by: R-
- 2019: Estimate informed by estimated DTP3 coverage adjusted for dropout. Estimate challenged by: R-
- 2018: Estimate informed by estimated DTP3 coverage adjusted for dropout. Estimate challenged by: R-
- 2017: Estimate informed by estimated DTP3 coverage adjusted for dropout. Estimate challenged by: R-
- 2016: Estimate informed by estimated DTP3 coverage adjusted for dropout. Estimate challenged by: R-
- 2015: Estimate informed by estimated DTP3 coverage adjusted for dropout. Estimate challenged by: R-
- 2014: Estimate informed by estimated DTP3 coverage adjusted for dropout. Results from the National Health and Morbidity Survey conducted in 2016 among children aged 12-23 months, reflecting coverage for the 2014 birth cohort, support reported coverage. Estimate challenged by: R-
- 2013: Estimate informed by estimated DTP3 coverage adjusted for dropout. Estimate challenged by: R-

# Malaysia - DTP3

MYS - DTP3



## Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded because 108 percent greater than 100 percent. Reported data excluded due to an increase from 97 percent to 108 percent with decrease to 93 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. Estimate of 95 percent changed from previous revision value of 97 percent. Estimate challenged by: D-
- 2022: Estimate informed by reported data. GoC=R+ S+ D+
- 2021: Estimate informed by reported data supported by survey. Survey evidence of 91 percent based on 1 survey(s). Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. GoC=R+ S+ D+
- 2020: Estimate informed by reported data. GoC=R+ S+ D+
- 2019: Estimate informed by reported data. GoC=R+ S+ D+
- 2018: Estimate informed by reported administrative data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Results from the National Health and Morbidity Survey conducted in 2016 among children aged 12-23 months, reflecting coverage for the 2014 birth cohort, support reported coverage. GoC=R+ D+
- 2013: Estimate informed by reported administrative data. GoC=R+ D+

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	97	99	98	99	99	98	98	95	97	95	93
Estimate GoC	●●	●●	●●	●●	●●	●●	●●●	●●●	●●●	●●●	●	●●
Official	-	-	99	-	-	-	98	98	95	97	108	93
Administrative	97	97	99	98	99	100	98	98	94	97	108	93
Survey	-	-	-	-	-	-	-	-	91	-	-	-

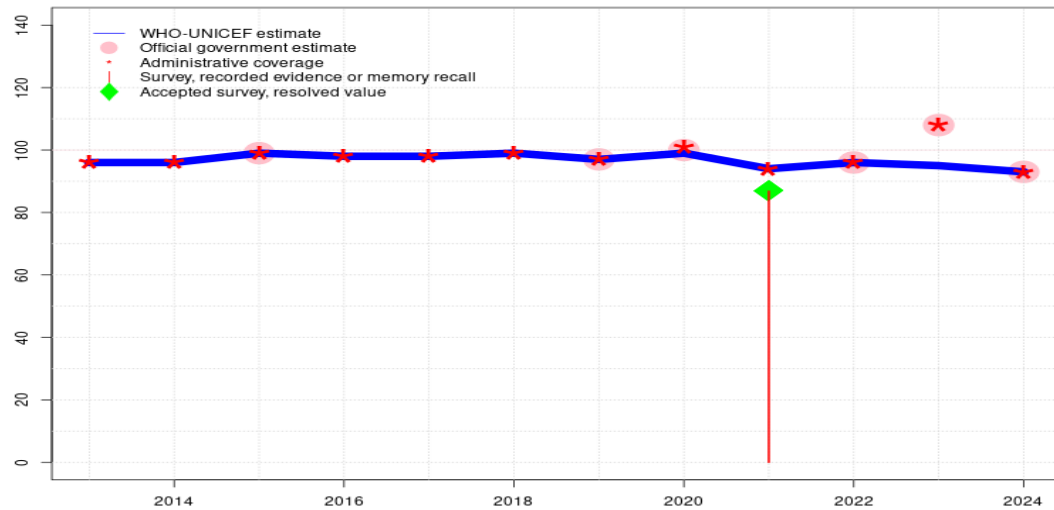
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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.
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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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# Malaysia - HEPB3

MYS - HEPB3



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	96	96	99	98	98	99	97	99	94	96	95	93
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●	●	●●	●	●●
Official	-	-	99	-	-	-	97	100	-	96	108	93
Administrative	96	96	99	98	98	99	97	101	94	96	108	93
Survey	-	-	-	-	-	-	-	-	87	-	-	-

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.

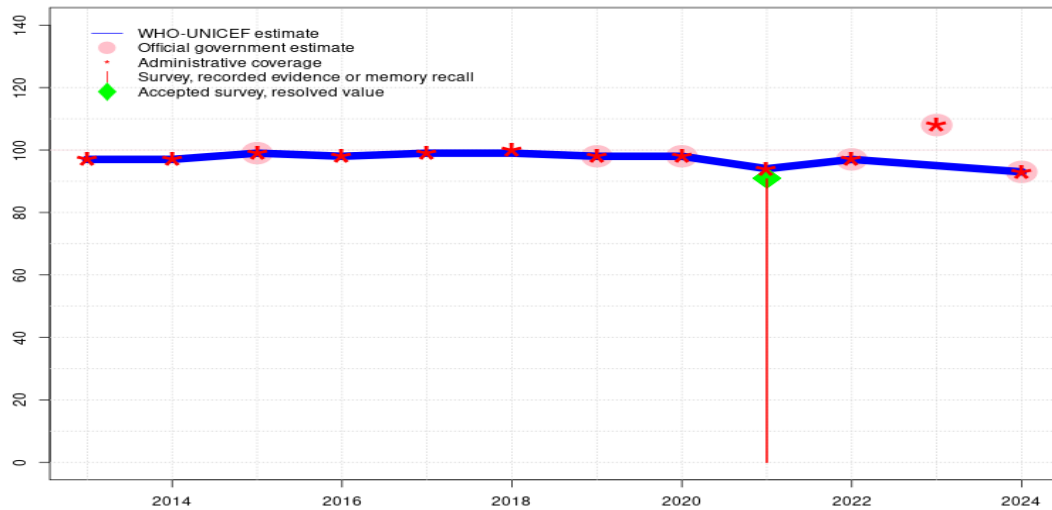
## Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded because 108 percent greater than 100 percent. Reported data excluded due to an increase from 96 percent to 108 percent with decrease to 93 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. Estimate of 95 percent changed from previous revision value of 97 percent. Estimate challenged by: D-
- 2022: Estimate informed by reported data. GoC=R+ S+ D+
- 2021: Estimate informed by reported administrative data supported by survey. Survey evidence of 87 percent based on 1 survey(s). Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Estimate challenged by: S-
- 2019: Estimate informed by reported data. GoC=R+ S+ D+
- 2018: Estimate informed by reported administrative data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Results from the National Health and Morbidity Survey conducted in 2016 among children aged 12-23 months, reflecting coverage for the 2014 birth cohort, support reported coverage. GoC=R+ D+
- 2013: Estimate informed by reported administrative data. GoC=R+ D+



# Malaysia - HIB3

MYS - HIB3



## Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded because 108 percent greater than 100 percent. Reported data excluded due to an increase from 97 percent to 108 percent with decrease to 93 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. Estimate of 95 percent changed from previous revision value of 97 percent. Estimate challenged by: D-
- 2022: Estimate informed by reported data. GoC=R+ S+ D+
- 2021: Estimate informed by reported administrative data supported by survey. Survey evidence of 91 percent based on 1 survey(s). Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. GoC=R+ S+ D+
- 2019: Estimate informed by reported data. GoC=R+ S+ D+
- 2018: Estimate informed by reported administrative data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Results from the National Health and Morbidity Survey conducted in 2016 among children aged 12-23 months, reflecting coverage for the 2014 birth cohort, support reported coverage. GoC=R+ D+
- 2013: Estimate informed by reported administrative data. GoC=R+ D+

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	97	99	98	99	99	98	98	94	97	95	93
Estimate GoC	●●	●●	●●	●●	●●	●●	●●●	●●●	●	●●●	●	●●
Official	-	-	99	-	-	-	98	98	-	97	108	93
Administrative	97	97	99	98	99	100	98	98	94	97	108	93
Survey	-	-	-	-	-	-	-	-	91	-	-	-

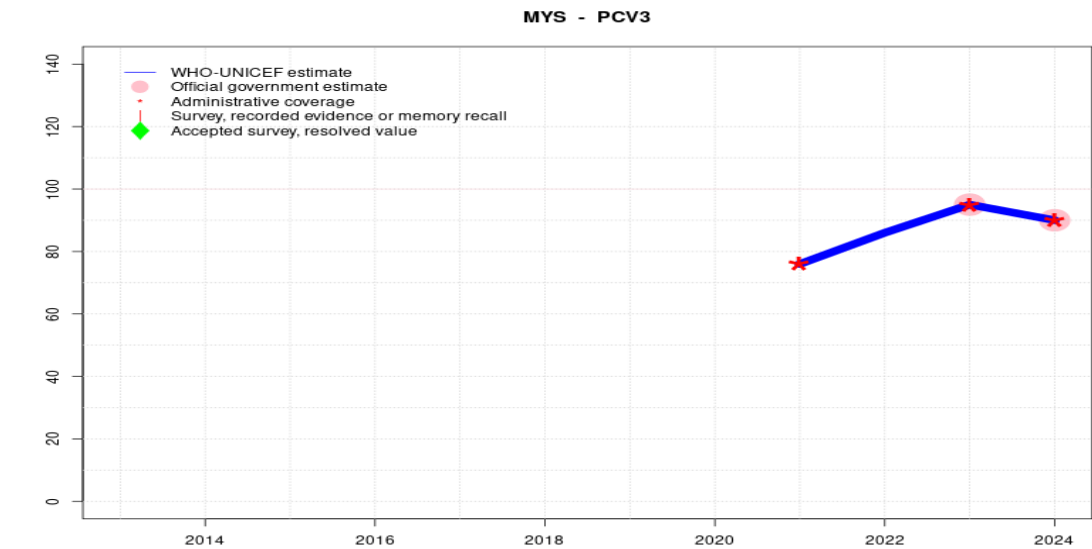
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- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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# Malaysia - PCV3



## Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by reported data. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. GoC=R+ D+
- 2022: Estimate informed by interpolation between reported data. GoC=No accepted empirical data
- 2021: Estimate informed by reported administrative data. Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. Vaccine universally introduced for infants in December 2020. Reporting started in 2021. Estimate challenged by: D-

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	-	-	-	-	-	-	-	-	76	86	95	90
Estimate GoC	-	-	-	-	-	-	-	-	●	●	●●	●●
Official	-	-	-	-	-	-	-	-	-	-	95	90
Administrative	-	-	-	-	-	-	-	-	76	-	95	90
Survey	-	-	-	-	-	-	-	-	-	-	-	-

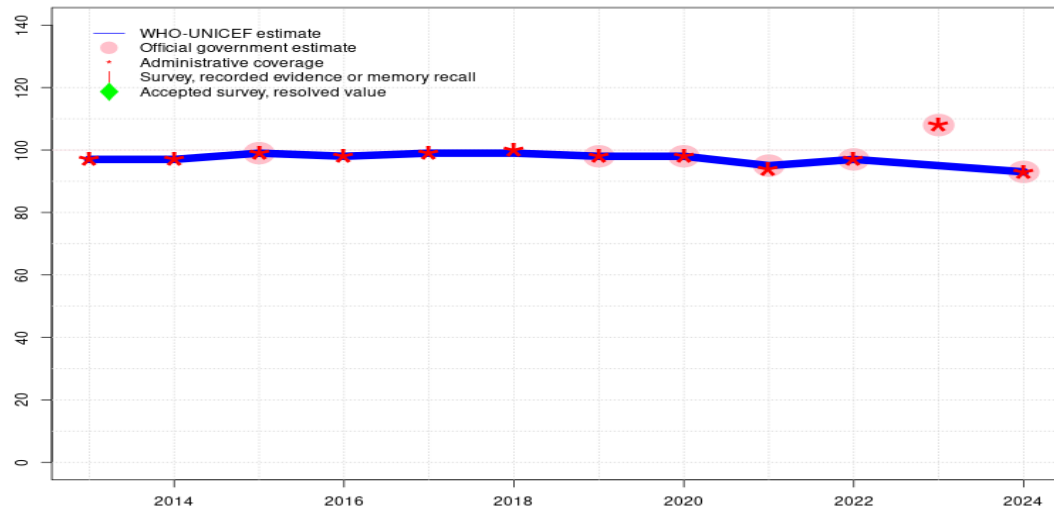
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

# Malaysia - POL3

MYS - POL3



Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded because 108 percent greater than 100 percent. Reported data excluded due to an increase from 97 percent to 108 percent with decrease to 93 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. Estimate of 95 percent changed from previous revision value of 97 percent. Estimate challenged by: D-
- 2022: Estimate informed by reported data. GoC=R+ D+
- 2021: Estimate informed by reported data. Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. GoC=R+ D+
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported administrative data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Results from the National Health and Morbidity Survey conducted in 2016 among children aged 12-23 months, reflecting coverage for the 2014 birth cohort, support reported coverage. GoC=R+ D+
- 2013: Estimate informed by reported administrative data. GoC=R+ D+

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	97	97	99	98	99	99	98	98	95	97	95	93
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●	●●
Official	-	-	99	-	-	-	98	98	95	97	108	93
Administrative	97	97	99	98	99	100	98	98	94	97	108	93
Survey	-	-	-	-	-	-	-	-	-	-	-	-

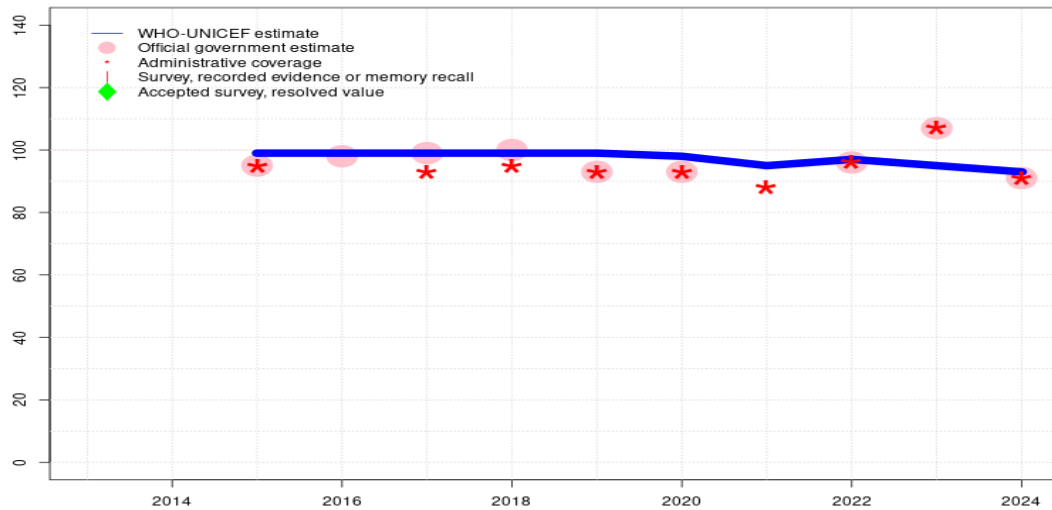
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

# Malaysia - IPV1

MYS - IPV1



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	-	-	99	99	99	99	99	98	95	97	95	93
Estimate GoC	-	-	•	•	•	•	•	•	•	•	•	•
Official	-	-	95	98	99	100	93	93	-	96	107	91
Administrative	-	-	95	-	93	95	93	93	88	96	107	91
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.

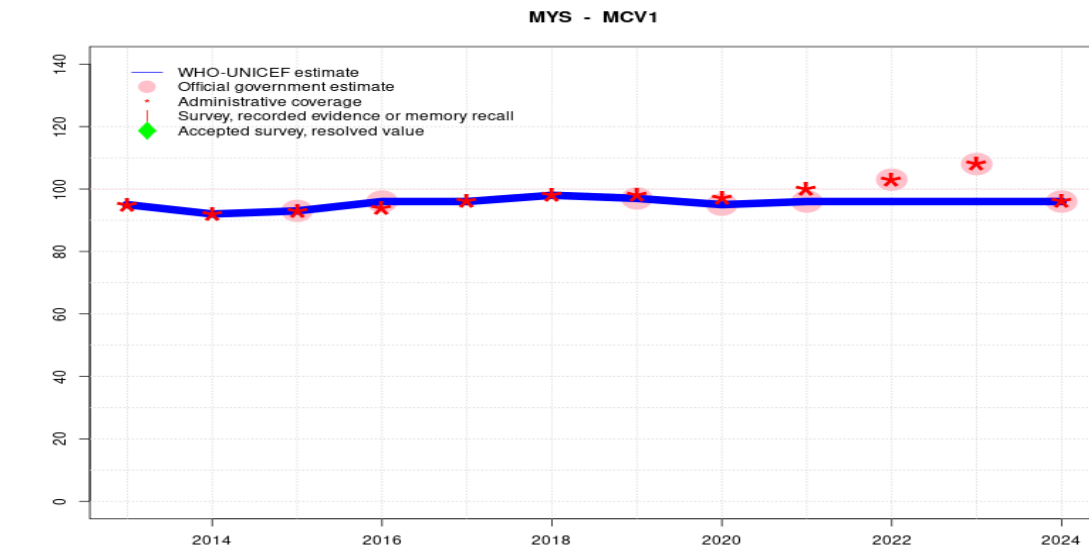
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2024 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2024: Estimate informed by estimated DTP1 coverage. Reported data excluded due to sudden change in coverage from 107 to 91 percent. Estimate challenged by: R-
- 2023: Estimate informed by estimated DTP1 coverage. Reported data excluded because 107 percent greater than 100 percent. Reported data excluded due to an increase from 96 percent to 107 percent with decrease to 91 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. Estimate of 95 percent changed from previous revision value of 99 percent. Estimate challenged by: R-
- 2022: Estimate informed by estimated DTP1 coverage. Estimate of 97 percent changed from previous revision value of 99 percent. Estimate challenged by: R-
- 2021: Estimate informed by estimated DTP1 coverage. Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. Estimate of 95 percent changed from previous revision value of 98 percent. Estimate challenged by: R-
- 2020: Estimate informed by estimated DTP1 coverage. Estimate of 98 percent changed from previous revision value of 99 percent. Estimate challenged by: R-
- 2019: Estimate informed by estimated DTP1 level. Estimate challenged by: R-
- 2018: Estimate informed by estimated DTP1 level. Estimate challenged by: R-
- 2017: Estimate informed by estimated DTP1 level. Estimate challenged by: R-
- 2016: Estimate informed by estimated DTP1 level. Estimate of 99 percent changed from previous revision value of 98 percent. Estimate challenged by: R-
- 2015: Estimate informed by estimated DTP1 level. Inactivated polio vaccine as part of a combination DTP-IPV-Hib vaccine in June 2009 and was available nationally during 2010. Estimate challenged by: R-

# Malaysia - MCV1



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	95	92	93	96	96	98	97	95	96	96	96	96
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●	●	●	●●	●●
Official	-	-	93	96	-	-	97	95	96	103	108	96
Administrative	95	92	93	94	96	98	98	97	100	103	108	96
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.

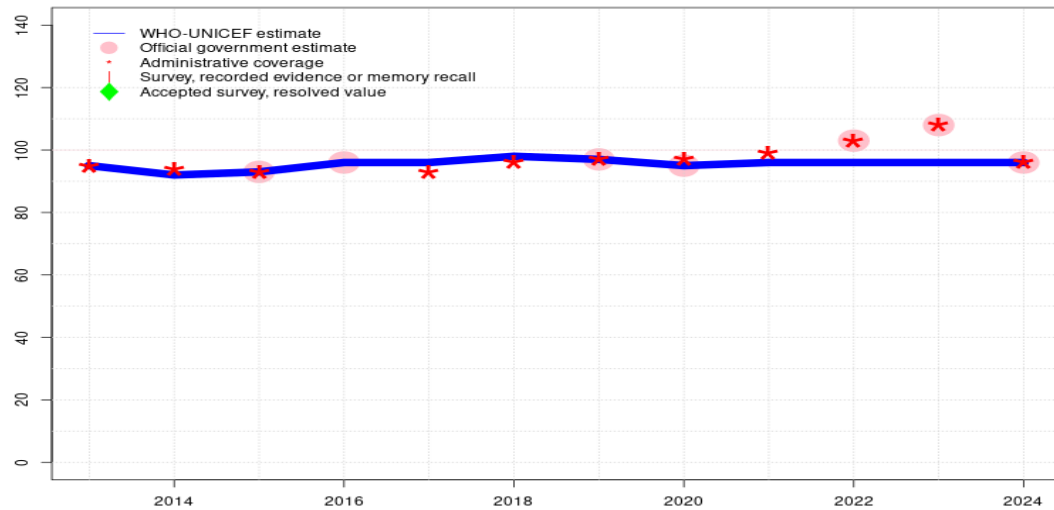
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded because 108 percent greater than 100 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. GoC=R+ D+
- 2022: Estimate informed by interpolation between reported data. Reported data excluded because 103 percent greater than 100 percent. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Estimate challenged by: D-
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported administrative data. GoC=R+ D+
- 2017: Estimate informed by reported administrative data. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate of 96 percent changed from previous revision value of 94 percent. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Results from the National Health and Morbidity Survey conducted in 2016 among children aged 12-23 months, reflecting coverage for the 2014 birth cohort, support reported coverage. GoC=R+ D+
- 2013: Estimate informed by reported administrative data. GoC=R+ D+

# Malaysia - RCV1

MYS - RCV1



## Description:

- 2024: Estimate based on estimated MCV1. Reported data excluded due to sudden change in coverage from 108 to 96 percent. GoC=R+ D+
- 2023: Estimate based on estimated MCV1. Reported data excluded because 108 percent greater than 100 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. GoC=R+ D+
- 2022: Estimate based on estimated MCV1. Reported data excluded because 103 percent greater than 100 percent. Estimate challenged by: D-
- 2021: Estimate based on estimated MCV1. Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. Estimate challenged by: D-
- 2020: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2019: Estimate based on estimated MCV1. GoC=R+ D+
- 2018: Estimate based on estimated MCV1. GoC=R+ D+
- 2017: Estimate based on estimated MCV1. GoC=R+ D+
- 2016: Estimate based on estimated MCV1. Estimate of 96 percent changed from previous revision value of 94 percent. GoC=R+ D+
- 2015: Estimate based on estimated MCV1. GoC=R+ D+
- 2014: Estimate based on estimated MCV1. GoC=R+ D+
- 2013: Estimate based on estimated MCV1. GoC=R+ D+

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	95	92	93	96	96	98	97	95	96	96	96	96
Estimate GoC	●●	●●	●●	●●	●●	●●	●●	●	●	●	●●	●●
Official	-	-	93	96	-	-	97	95	-	103	108	96
Administrative	95	94	93	-	93	96	97	97	99	103	108	96
Survey	-	-	-	-	-	-	-	-	-	-	-	-

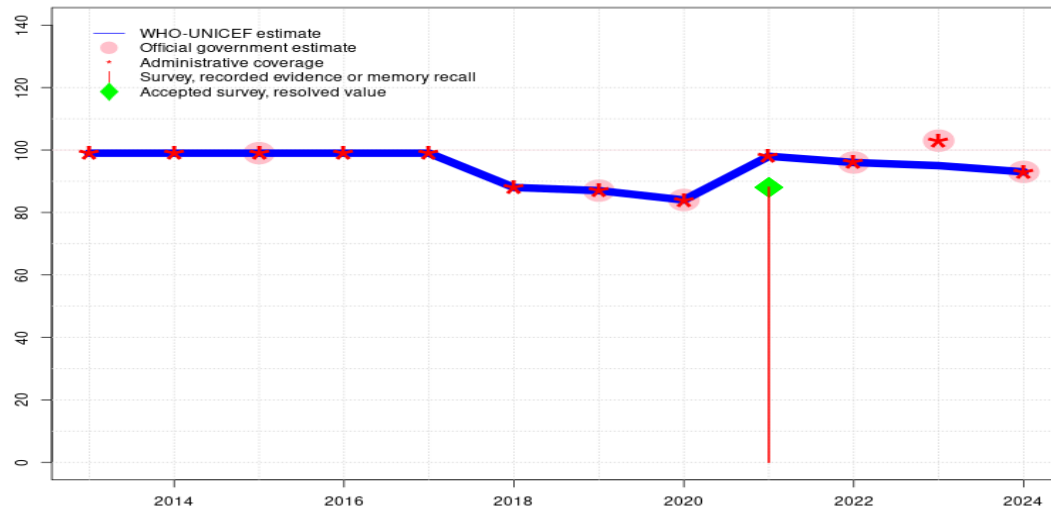
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

# Malaysia - MCV2

MYS - MCV2



## Description:

- 2024: Estimate informed by reported data. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded because 103 percent greater than 100 percent. Increase in vaccination coverage reported may reflect intensification activities conducted in 2023. The information system may not allow separating vaccination of older children from those in the target age groups. Estimate of 95 percent changed from previous revision value of 96 percent. GoC=R+ S+ D+
- 2022: Estimate informed by reported data. GoC=R+ S+ D+
- 2021: Estimate informed by reported administrative data supported by survey. Survey evidence of 88 percent based on 1 survey(s). Declines in reported number of doses administered since 2019 are largely not reflected in reported coverage levels due in part to declines in the reported target population. From 2019 to 2021, the reported target population decreased 7 percent. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Estimate challenged by: D-
- 2019: Estimate informed by reported data. Estimate challenged by: D-
- 2018: Estimate informed by reported administrative data. Reported decline in administrative coverage appears to be due in part to a change in the recommended age for administration and an increase in the reported target population. Number of children vaccinated increased 8 percent between 2017 and 2018. Estimate challenged by: D-
- 2017: Estimate informed by reported administrative data. GoC=R+ D+
- 2016: Estimate informed by reported administrative data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported administrative data. Estimate challenged by: D-
- 2013: Estimate informed by reported administrative data. Estimate challenged by: D-

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Estimate	99	99	99	99	99	88	87	84	98	96	95	93
Estimate GoC	●	●	●●	●●	●●	●	●	●	●	●●●	●●●	●●
Official	-	-	99	-	-	-	87	84	-	96	103	93
Administrative	99	99	99	99	99	88	87	84	98	96	103	93
Survey	-	-	-	-	-	-	-	-	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.

**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.

2021 Malaysia National Health and Morbidity Survey 2022

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Evidence seen
BCG	Record or Recall	94.9	12-23 m	3463	84
DTP3	Record or Recall	90.7	12-23 m	3463	84
HEPB3	Record or Recall	86.8	12-23 m	3463	84
HIB3	Record or Recall	90.7	12-23 m	3463	84
MCV2	Record or Recall	88.1	12-23 m	3463	84

2014 Malaysia National Health and Morbidity Survey 2016

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	Record	92.3	12-23 m	10138	86
DTP1	Recall	9.5	12-23 m	10139	86
DTP1	Record	89.8	12-23 m	10139	86
DTP3	Recall	9.5	12-23 m	10139	86
DTP3	Record	89	12-23 m	10139	86
HEPB1	Recall	7.8	12-23 m	10136	86
HEPB1	Record	92.2	12-23 m	10136	86
HEPB3	Recall	9.9	12-23 m	10136	86
HEPB3	Record	88.4	12-23 m	10136	86
HIB1	Recall	9.5	12-23 m	10139	86
HIB1	Record	89.8	12-23 m	10139	86
HIB3	Recall	9.5	12-23 m	10139	86
HIB3	Record	89	12-23 m	10139	86
IPV1	Recall	9.5	12-23 m	10139	86
IPV1	Record	89.8	12-23 m	10139	86
MCV1	Recall	9.3	12-23 m	10139	86
MCV1	Record	87.3	12-23 m	10139	86
POL1	Recall	9.5	12-23 m	10139	86
POL1	Record	89.8	12-23 m	10139	86
POL3	Recall	9.5	12-23 m	10139	86
POL3	Record	89	12-23 m	10139	86
RCV1	Recall	9.3	12-23 m	10139	86
RCV1	Record	87.3	12-23 m	10139	86