

Estonia: 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 Guérin 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.

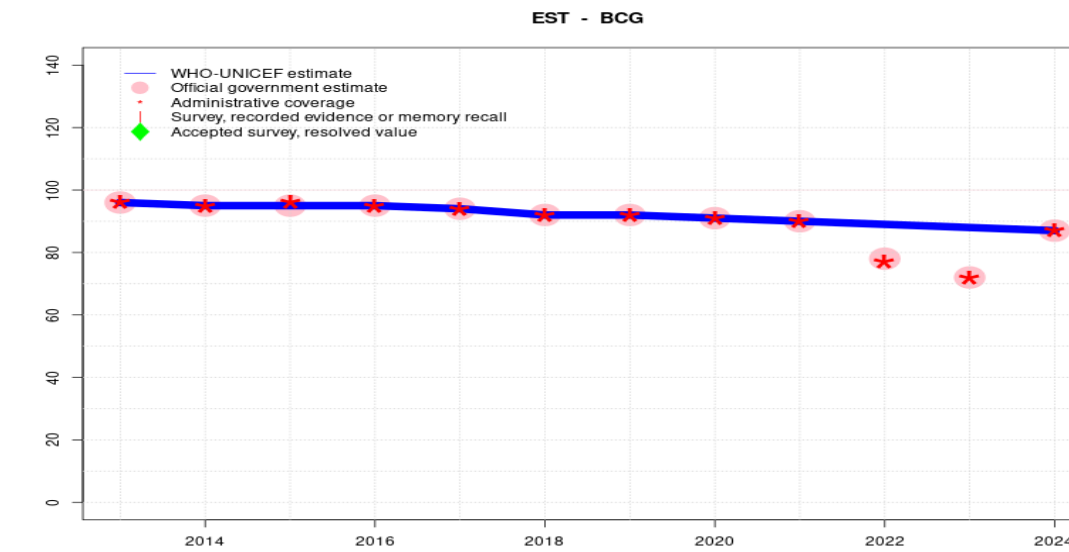
ROTAC: percentage of surviving infants who received the final recommended dose of rotavirus vaccine, which can be either the 2nd or the 3rd dose depending on the vaccine.

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.

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| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 96 | 95 | 95 | 95 | 94 | 92 | 92 | 91 | 90 | 89 | 88 | 87 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | • | •• |
| Official | 96 | 95 | 95 | 95 | 94 | 92 | 92 | 91 | 90 | 78 | 72 | 87 |
| Administrative | 96 | 95 | 96 | 95 | 94 | 92 | 92 | 91 | 90 | 77 | 72 | 87 |
| Survey | - | - | - | - | - | - | - | - | - | - | - | - |

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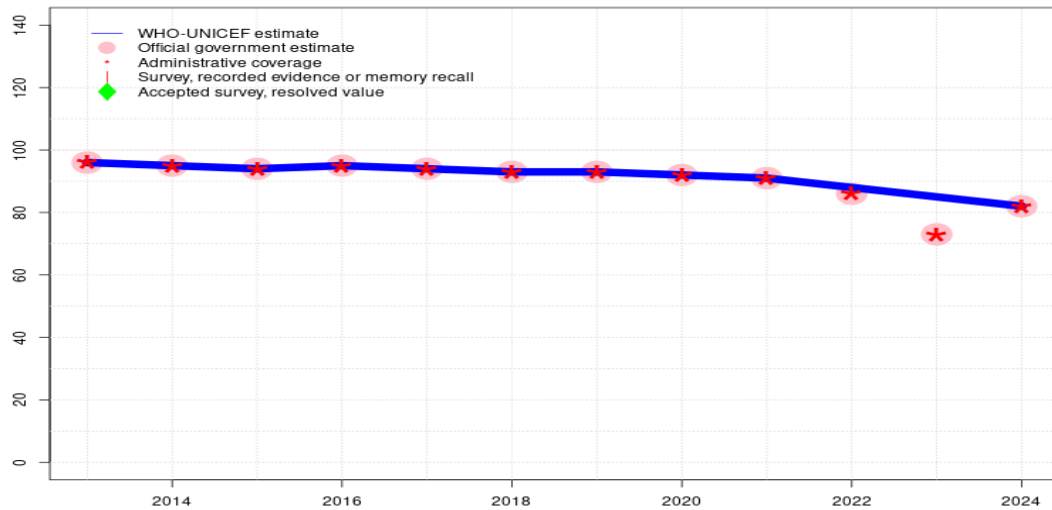
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Description:

- 2024: Estimate informed by reported data. No nationally representative independent assessment for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality independent assessment to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 88 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2022: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 89 percent changed from previous revision value of 90 percent. GoC=R+ D+
- 2021: Estimate informed by reported data. Reported target population is the number of children born in maternity hospitals during 2019. GoC=R+ D+
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
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- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
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- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+

Estonia - DTP1

EST - DTP1



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 96 | 95 | 94 | 95 | 94 | 93 | 93 | 92 | 91 | 88 | 85 | 82 |
| Estimate GoC | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ● | ●● | ●● |
| Official | 96 | 95 | 94 | 95 | 94 | 93 | 93 | 92 | 91 | 86 | 73 | 82 |
| Administrative | 96 | 95 | 94 | 95 | 94 | 93 | 93 | 92 | 91 | 86 | 73 | 82 |
| Survey | - | - | - | - | - | - | - | - | - | - | - | - |

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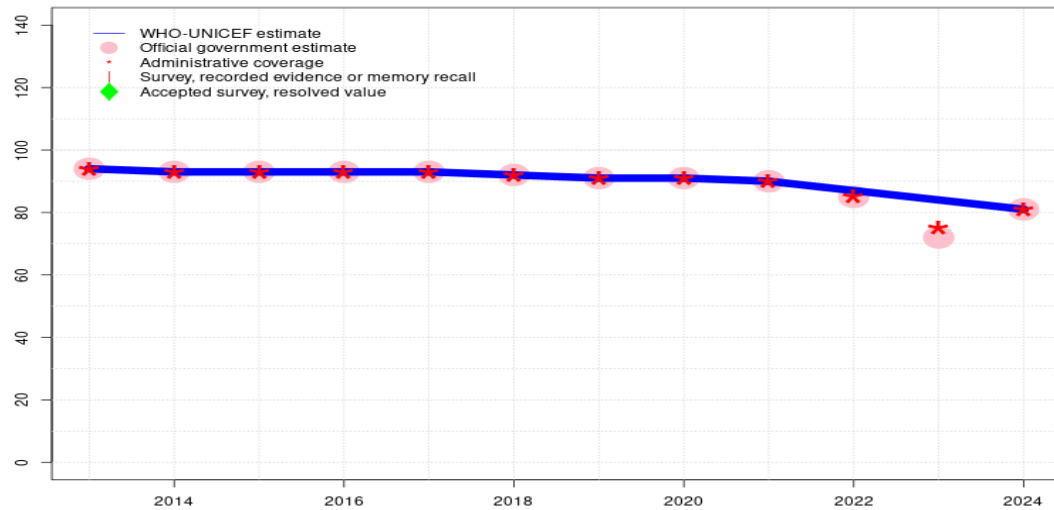
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- 2022: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 88 percent changed from previous revision value of 91 percent. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Reported target population reflects the number of children one year old who are registered in the family doctors lists of patients with DTP4. GoC=R+ D+
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Estimate of 93 percent changed from previous revision value of 92 percent. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Programme reports one month vaccine stockout. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate of 95 percent changed from previous revision value of 94 percent. GoC=R+ D+
- 2015: Estimate informed by reported data. Programme reports three months national level stockout. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+

Estonia - DTP3

EST - DTP3



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 94 | 93 | 93 | 93 | 93 | 92 | 91 | 91 | 90 | 87 | 84 | 81 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | •• | •• | • | •• | •• |
| Official | 94 | 93 | 93 | 93 | 93 | 92 | 91 | 91 | 90 | 85 | 72 | 81 |
| Administrative | 94 | 93 | 93 | 93 | 93 | 92 | 91 | 91 | 90 | 85 | 75 | 81 |
| Survey | - | - | - | - | - | - | - | - | - | - | - | - |

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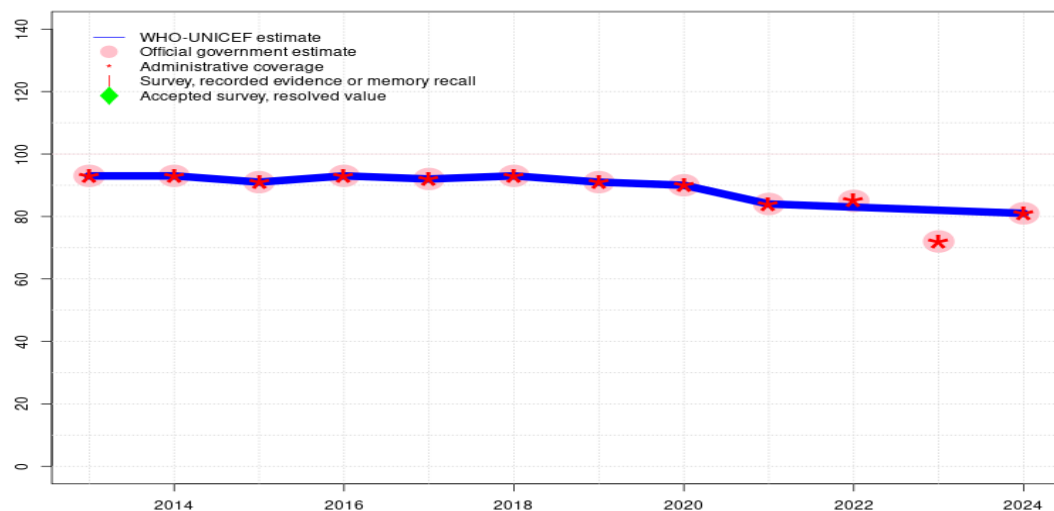
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- 2022: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 87 percent changed from previous revision value of 90 percent. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Reported target population reflects the number of children one year old who are registered in the family doctors lists of patients with DTP4. 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 data. GoC=R+ D+
- 2017: Estimate informed by reported data. Programme reports one month vaccine stockout. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. Programme reports three months national level stockout. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+

Estonia - HEPB3

EST - HEPB3



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 93 | 93 | 91 | 93 | 92 | 93 | 91 | 90 | 84 | 83 | 82 | 81 |
| Estimate GoC | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ● | ● | ●● | ●● |
| Official | 93 | 93 | 91 | 93 | 92 | 93 | 91 | 90 | 84 | 85 | 72 | 81 |
| Administrative | 93 | 93 | 91 | 93 | 92 | 93 | 91 | 90 | 84 | 85 | 72 | 81 |
| Survey | - | - | - | - | - | - | - | - | - | - | - | - |

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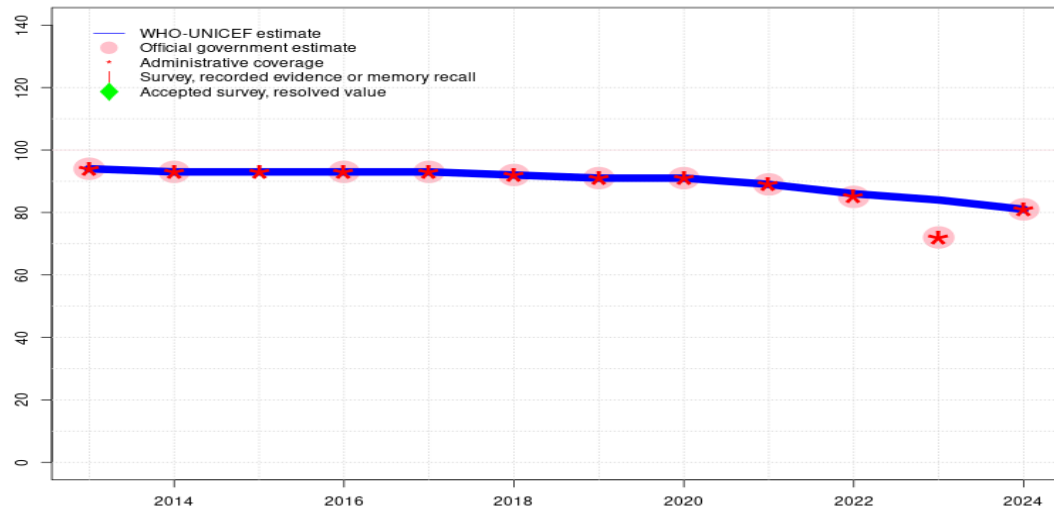
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- 2022: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 83 percent changed from previous revision value of 84 percent. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Reported target population reflects the number of children one year old who are registered in the family doctors lists of patients with DTP4. Estimate challenged by: D-
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+

Estonia - HIB3

EST - HIB3



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 94 | 93 | 93 | 93 | 93 | 92 | 91 | 91 | 89 | 86 | 84 | 81 |
| Estimate GoC | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ● | ●● | ●● |
| Official | 94 | 93 | - | 93 | 93 | 92 | 91 | 91 | 89 | 85 | 72 | 81 |
| Administrative | 94 | 93 | 93 | 93 | 93 | 92 | 91 | 91 | 89 | 85 | 72 | 81 |
| Survey | - | - | - | - | - | - | - | - | - | - | - | - |

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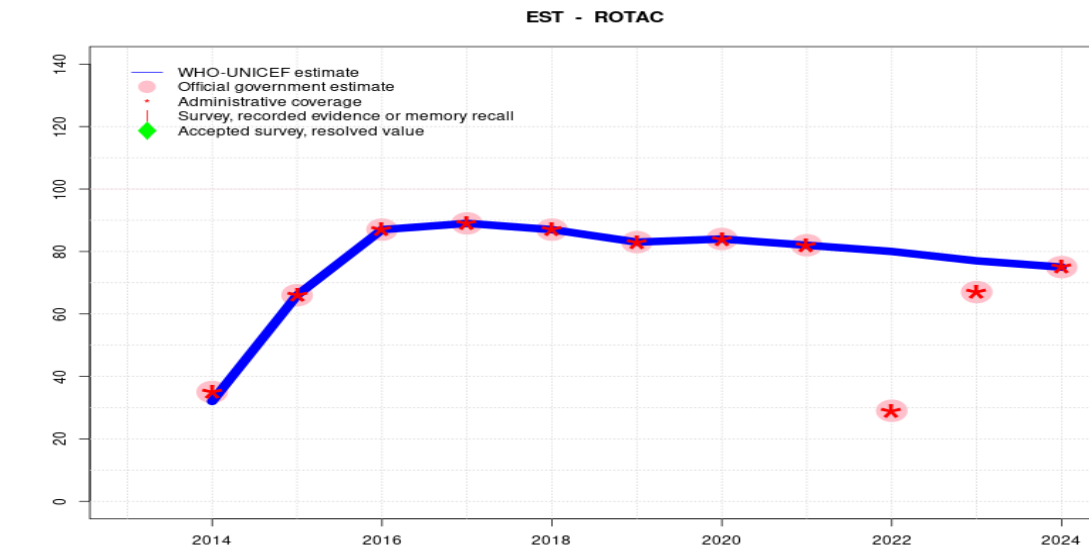
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- 2021: Estimate informed by reported data. Reported target population reflects the number of children one year old who are registered in the family doctors lists of patients with DTP4. GoC=R+ D+
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- 2015: Estimate informed by reported administrative data. Programme reports three months national level stockout. GoC=R+ D+
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- 2013: Estimate informed by reported data. GoC=R+ D+

Estonia - ROTAC



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | - | 32 | 66 | 87 | 89 | 87 | 83 | 84 | 82 | 80 | 77 | 75 |
| Estimate GoC | - | • | •• | •• | •• | •• | •• | •• | •• | • | •• | •• |
| Official | - | 35 | 66 | 87 | 89 | 87 | 83 | 84 | 82 | 29 | 67 | 75 |
| Administrative | - | 35 | 66 | 87 | 89 | 87 | 83 | 84 | 82 | 29 | 67 | 75 |
| Survey | - | - | - | - | - | - | - | - | - | - | - | - |

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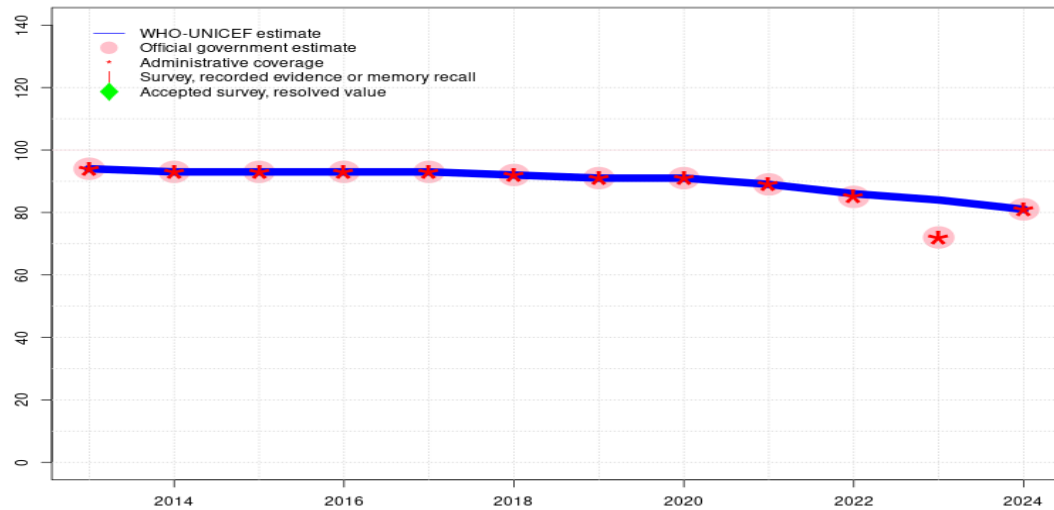
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- 2021: Estimate informed by reported data. Reported target population reflects the number of children one year old who are registered in the family doctors lists of patients with DTP4. Estimate of 82 percent changed from previous revision value of 80 percent. GoC=R+ D+
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- 2018: Estimate informed by reported data. Estimate of 87 percent changed from previous revision value of 85 percent. GoC=R+ D+
- 2017: Estimate informed by reported data. Programme reports use of two- and three-dose schedule rotavirus vaccine. Estimate of 89 percent changed from previous revision value of 87 percent. GoC=R+ D+
- 2016: Estimate informed by reported data. Estimate of 87 percent changed from previous revision value of 85 percent. GoC=R+ D+
- 2015: Estimate based on reported data. Estimate of 66 percent changed from previous revision value of 64 percent. GoC=R+ D+
- 2014: Estimate of 32 percent assigned by working group. Rotavirus vaccine introduced in 2014. Programme achieved 34 percent coverage in 93 percent of the national target population. Estimate informed by total national target population. Estimate challenged by: R-

Estonia - POL3

EST - POL3



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 94 | 93 | 93 | 93 | 93 | 92 | 91 | 91 | 89 | 86 | 84 | 81 |
| Estimate GoC | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ● | ●● | ●● |
| Official | 94 | 93 | 93 | 93 | 93 | 92 | 91 | 91 | 89 | 85 | 72 | 81 |
| Administrative | 94 | 93 | 93 | 93 | 93 | 92 | 91 | 91 | 89 | 85 | 72 | 81 |
| 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.

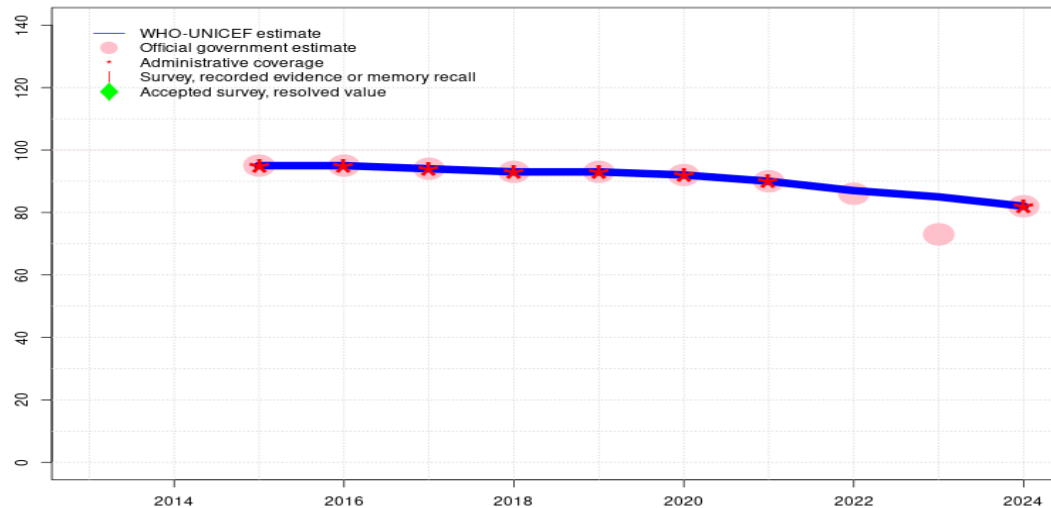
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2024: Estimate informed by reported data. No nationally representative independent assessment for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality independent assessment to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 84 percent changed from previous revision value of 89 percent. GoC=R+ D+
- 2022: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 86 percent changed from previous revision value of 89 percent. Estimate challenged by: D-
- 2021: Estimate informed by reported data. Reported target population reflects the number of children one year old who are registered in the family doctors lists of patients with DTP4. 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 data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. Programme reports three months national level stockout. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+

Estonia - IPV1

EST - IPV1



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | - | - | 95 | 95 | 94 | 93 | 93 | 92 | 90 | 87 | 85 | 82 |
| Estimate GoC | - | - | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● |
| Official | - | - | 95 | 95 | 94 | 93 | 93 | 92 | 90 | 86 | 73 | 82 |
| Administrative | - | - | 95 | 95 | 94 | 93 | 93 | 92 | 90 | - | - | 82 |
| 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.

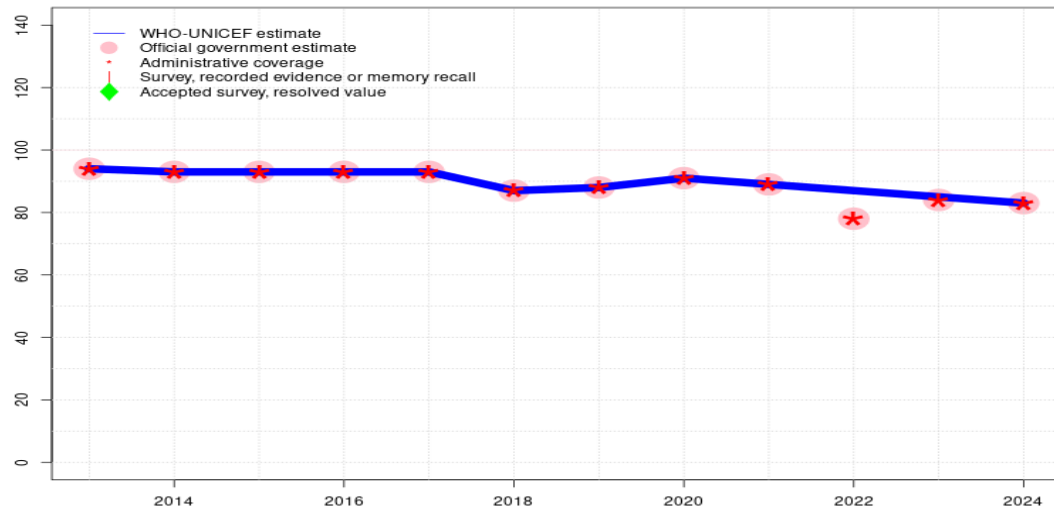
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2024: Estimate informed by reported data. No nationally representative independent assessment for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality independent assessment to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 85 percent changed from previous revision value of 90 percent. GoC=R+
- 2022: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 87 percent changed from previous revision value of 90 percent. GoC=R+
- 2021: Estimate informed by reported data. Reported target population reflects the number of children one year old who are registered in the family doctors lists of patients with DTP4. GoC=R+ D+
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. Estimate of 93 percent changed from previous revision value of 92 percent. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+

Estonia - MCV1

EST - MCV1



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 94 | 93 | 93 | 93 | 93 | 87 | 88 | 91 | 89 | 87 | 85 | 83 |
| Estimate GoC | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ● | ● | ●● |
| Official | 94 | 93 | 93 | 93 | 93 | 87 | 88 | 91 | 89 | 78 | 84 | 83 |
| Administrative | 94 | 93 | 93 | 93 | 93 | 87 | 88 | 91 | 89 | 78 | 84 | 83 |
| 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.

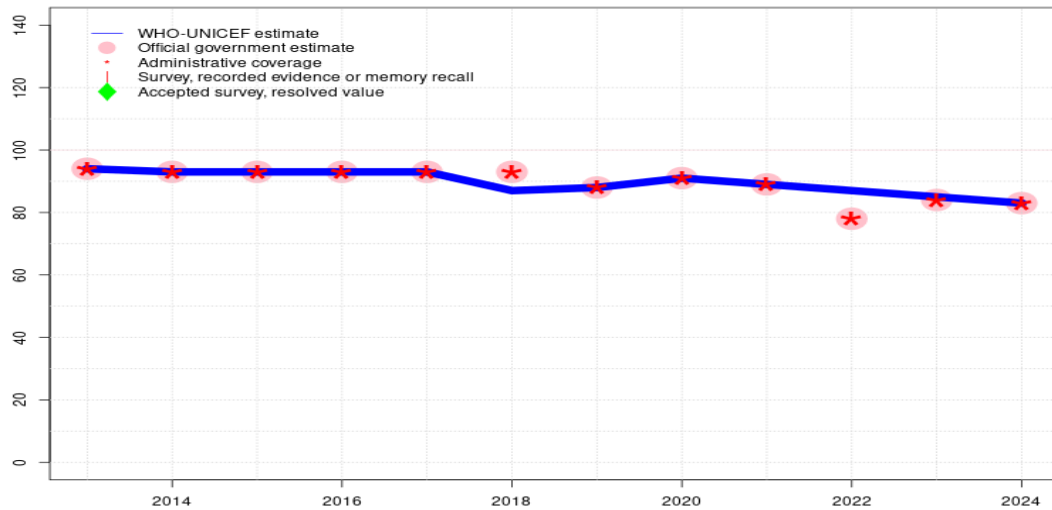
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2024: Estimate informed by reported data. No nationally representative independent assessment for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality independent assessment to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 85 percent changed from previous revision value of 89 percent. Estimate challenged by: D-
- 2022: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Unexplained increase of six percent in reported target population between 2021 and 2022. Estimate of 87 percent changed from previous revision value of 89 percent. 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 reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. GoC=R+ D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+ D+
- 2014: Estimate informed by reported data. GoC=R+ D+
- 2013: Estimate informed by reported data. GoC=R+ D+

Estonia - RCV1

EST - RCV1



Description:

- 2024: Estimate based on estimated MCV1. No nationally representative independent assessment for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality independent assessment to verify reported levels of coverage. GoC=R+ D+
- 2023: Estimate based on estimated MCV1. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 85 percent changed from previous revision value of 89 percent. Estimate challenged by: D-
- 2022: Estimate based on estimated MCV1. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 87 percent changed from previous revision value of 89 percent. Estimate challenged by: D-
- 2021: Estimate based on estimated MCV1. GoC=R+ D+
- 2020: Estimate based on estimated MCV1. GoC=R+ 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. 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 | 94 | 93 | 93 | 93 | 93 | 87 | 88 | 91 | 89 | 87 | 85 | 83 |
| Estimate GoC | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ● | ● | ●● |
| Official | 94 | 93 | 93 | 93 | 93 | 93 | 88 | 91 | 89 | 78 | 84 | 83 |
| Administrative | 94 | 93 | 93 | 93 | 93 | 93 | 88 | 91 | 89 | 78 | 84 | 83 |
| Survey | - | - | - | - | - | - | - | - | - | - | - | - |

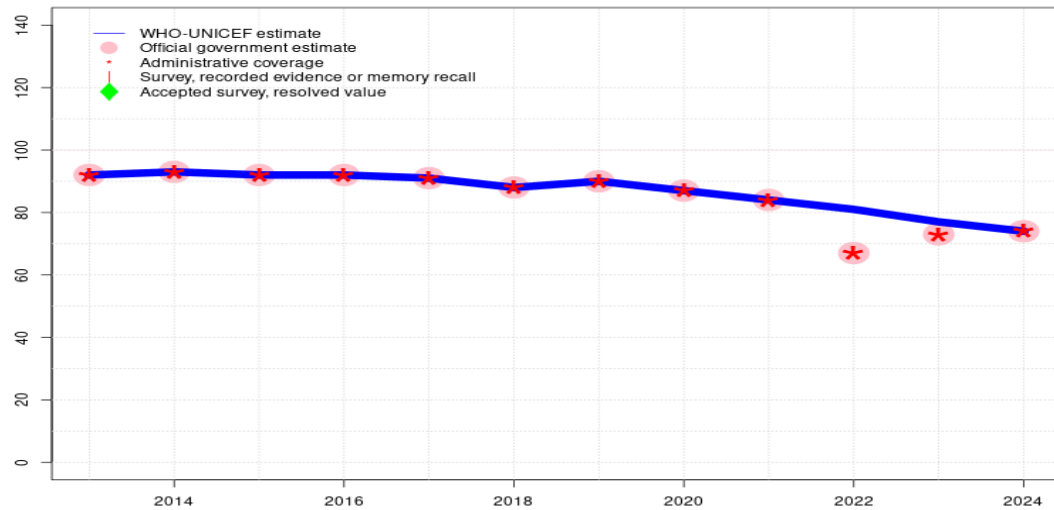
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

Estonia - MCV2

EST - MCV2



| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 92 | 93 | 92 | 92 | 91 | 88 | 90 | 87 | 84 | 81 | 77 | 74 |
| Estimate GoC | ● | ● | ● | ● | ● | ●● | ●● | ●● | ● | ●● | ● | ● |
| Official | 92 | 93 | 92 | 92 | 91 | 88 | 90 | 87 | 84 | 67 | 73 | 74 |
| Administrative | 92 | 93 | 92 | 92 | 91 | 88 | 90 | 87 | 84 | 67 | 73 | 74 |
| 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. No nationally representative independent assessment for the most recent 5 annual birth cohorts. WHO and UNICEF recommend a high quality independent assessment to verify reported levels of coverage. Estimate challenged by: D-
- 2023: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 77 percent changed from previous revision value of 84 percent. Estimate challenged by: D-
- 2022: Estimate informed by interpolation between reported data. Reported data excluded. Beginning in 2022, reported data are obtained from the electronic health information system within which vaccinators are obliged to send notifications. Programme indicates that not all reports have been submitted in 2022 and 2023. This may explain reported coverage declines for several vaccines. Estimate of 81 percent changed from previous revision value of 84 percent. GoC=R+ D+
- 2021: Estimate informed by reported data. Estimate challenged by: D-
- 2020: Estimate informed by reported data. GoC=R+ D+
- 2019: Estimate informed by reported data. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Estimate challenged by: D-
- 2016: Estimate informed by reported data. Estimate challenged by: D-
- 2015: Estimate informed by reported data. Estimate challenged by: D-
- 2014: Estimate informed by reported data. Estimate challenged by: D-
- 2013: Estimate informed by reported data. Estimate challenged by: D-

Further information and estimates for previous years are available at:

<https://data.unicef.org/topic/child-health/immunization/>

<https://immunizationdata.who.int/listing.html>