

July 1, 2023; page 1

WHO and UNICEF estimates of national immunization coverage - next revision available July $15,\,2024$

BACKGROUND NOTE: Each year WHO and UNICEF jointly review reports submitted by Member States regarding national immunization coverage, finalized survey reports as well as data from the published and grey literature. Based on these data, with due consideration to potential biases and the views of local experts, WHO and UNICEF attempt to distinguish between situations where the available empirical data accurately reflect immunization system performance and those where the data are likely to be compromised and present a misleading view of immunization coverage while jointly estimating the most likely coverage levels for each country.

WHO and UNICEF estimates are country-specific; that is to say, each country's data are reviewed individually, and data are not borrowed from other countries in the absence of data. Estimates are not based on ad hoc adjustments to reported data; in some instances empirical data are available from a single source, usually the nationally reported coverage data. In cases where no data are available for a given country/vaccine/year combination, data are considered from earlier and later years and interpolated to estimate coverage for the missing year(s). In cases where data sources are mixed and show large variation, an attempt is made to identify the most likely estimate with consideration of the possible biases in available data. For methods see:

*Burton et al. 2009. WHO and UNICEF estimates of national infant immunization coverage: methods and processes.

*Burton et al. 2012. A formal representation of the WHO and UNICEF estimates of national immunization coverage: a computational logic approach.

*Brown et al. 2013. An introduction to the grade of confidence used to characterize uncertainty around the WHO and UNICEF estimates of national immunization coverage.

DATA SOURCES.

- ADMINISTRATIVE coverage: Reported by national authorities and based on aggregated administrative reports from health service providers on the number of vaccinations administered during a given period (numerator data) and reported target population data (denominator data). May be biased by inaccurate numerator and/or denominator data.
- **OFFICIAL coverage:** Estimated coverage reported by national authorities that reflects their assessment of the most likely coverage based on any combination of administrative coverage, survey-based estimates or other data sources or adjustments. Approaches to determine OFFICIAL coverage may differ across countries.
- SURVEY coverage: Based on estimated coverage from population-based household surveys among children aged 12-23 months or 24-35 months following a review of survey methods and results. Information is based on the combination of vaccination history from documented evidence or caregiver recall. Survey results are considered for the appropriate birth cohort based on the period of data collection.

ABBREVIATIONS

BCG: percentage of births who received one dose of Bacillus Calmette Guerin vaccine.

DTP1 / DTP3: percentage of surviving infants who received the 1st / 3rd dose, respectively, of diphtheria and tetanus toxoid with pertussis containing vaccine.

Pol3: percentage of surviving infants who received the 3rd dose of polio containing vaccine. May be either oral or inactivated polio vaccine.

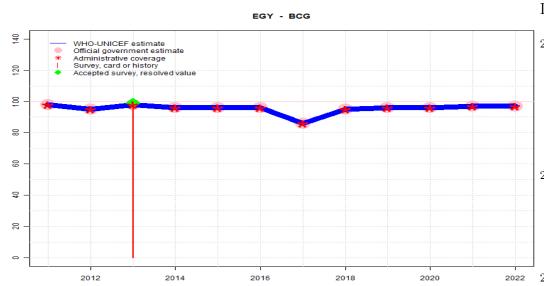
IPV1: percentage of surviving infants who received at least one dose of inactivated polio vaccine. In countries utilizing an immunization schedule recommending either (i) a primary series of three doses of oral polio vaccine (OPV) plus at least one dose of IPV where OPV is included in routine

immunization and/or campaign or (ii) a sequential schedule of IPV followed by OPV, WHO and UNICEF estimates for IPV1 reflect coverage with at least one routine dose of IPV among infants <1 year of age among countries. For countries utilizing IPV containing vaccine use only, i.e., no recommended dose of OPV, the WHO and UNICEF estimate for IPV1 corresponds to coverage for the 1st dose of IPV.

Production of IPV coverage estimates, which begins in 2015, results in no change of the estimated coverage levels for the 3rd dose of polio (Pol3). For countries recommending routine immunization with a primary series of three doses of IPV alone, WHO and UNICEF estimated Pol3 coverage is equivalent to estimated coverage with three doses of IPV. For countries with a sequential schedule, estimated Pol3 coverage is based on that for the 3rd dose of polio vaccine regardless of vaccine type.

- MCV1: percentage of surviving infants who received the 1st dose of measles containing vaccine. In countries where the national schedule recommends the 1st dose of MCV at 12 months or later based on the epidemiology of disease in the country, coverage estimates reflect the percentage of children who received the 1st dose of MCV as recommended.
- MCV2: percentage of children who received the 2nd dose of measles containing vaccine according to the nationally recommended schedule.
- RCV1: percentage of surviving infants who received the 1st dose of rubella containing vaccine. Co verage estimates are based on WHO and UNICEF estimates of coverage for the dose of measles containing vaccine that corresponds to the first measles-rubella combination vaccine. Nationally reported coverage of RCV is not taken into consideration nor are the data represented in the accompanying graph and data table.
- HepBB: percentage of births which received a dose of hepatitis B vaccine within 24 hours of delivery. Estimates of hepatitis B birth dose coverage are produced only for countries with a universal birth dose policy. Estimates are not produced for countries that recommend a birth dose to infants born to HepB virus-infected mothers only or where there is insufficient information to determine whether vaccination is within 24 hours of birth.
- **HepB3:** percentage of surviving infants who received the 3rd dose of hepatitis B containing vaccine following the birth dose.
- **Hib3:** percentage of surviving infants who received the 3rd dose of Haemophilus influenzae type b containing vaccine.
- RotaC: percentage of surviving infants who received the final recommended dose of rotavirus vaccine, which can be either the 2nd or the 3rd dose depending on the vaccine.
- PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect the percentage of surviving infants who received two doses of PcV prior to the 1st birthday.
- **YFV:** percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

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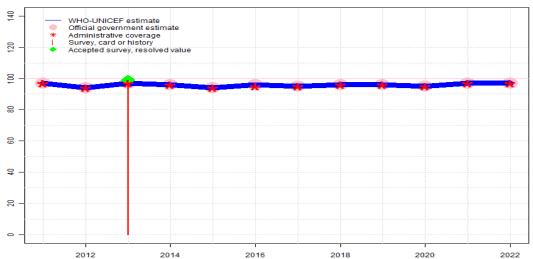
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	98	95	98	96	96	96	86	95	96	96	97	97
Estimate GoC	•••	•••	•	•••	•••	••	••	••	••	••	•	•
Official	98	95	98	96	96	96	86	95	96	96	97	97
Administrative	98	95	98	96	96	96	86	95	96	96	97	97
Survey	NA	NA	99	NA								

- ••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 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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- 2020: Estimate informed by reported data. Reported numerator and denominator continues to decline since 2017. Decline is about an additional three percent between 2019 and 2020 for vaccines recommended in infancy. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. The denominator is the number of registered births in the target period according to the due date for each dose. GoC=R+D+
- 2019: Estimate informed by reported data. Reported numerator and denominator decline of about six percent between 2018 and 2019 for vaccines recommended in infancy. GoC=R+ D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Programme reports 5.5 months national stockout. GoC=R+D+
- 2016: Estimate informed by reported data. GoC=R+ D+
- 2015: Estimate informed by reported data. GoC=R+S+D+
- 2014: Estimate informed by reported data. GoC=R+S+D+
- 2013: Estimate informed by reported data supported by survey. Survey evidence of 99 percent based on 1 survey(s). Estimate challenged by: D-
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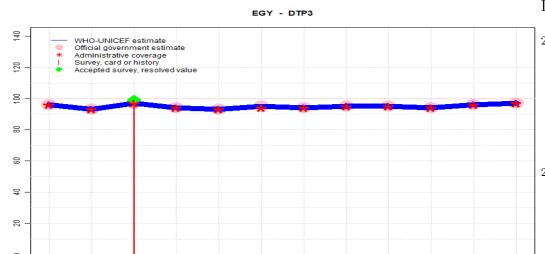


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	97	94	97	96	94	96	95	96	96	95	97	97
Estimate GoC	•••	•••	•	•••	•••	••	••	••	••	••	•	•
Official	97	94	97	96	94	96	95	96	96	95	97	97
Administrative	97	94	97	96	94	95	95	96	96	95	97	97
Survey	NA	NA	99	NA								

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	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	96	93	97	94	93	95	94	95	95	94	96	97
Estimate GoC	•••	•••	•	•••	•••	••	••	••	••	••	•	•
Official	96	93	97	94	93	95	94	95	95	94	96	97
Administrative	96	93	97	94	93	94	94	95	95	94	96	97
Survey	NA	NA	97	NA								

2016

2018

2020

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

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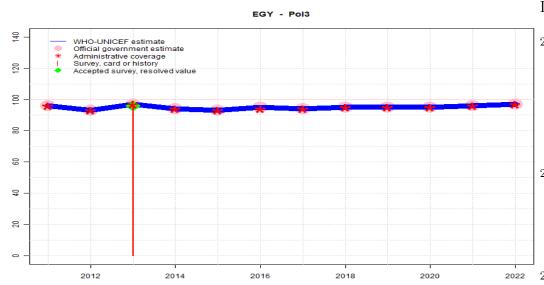
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2012

2014

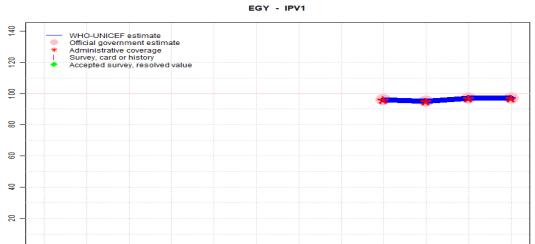


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	96	93	97	94	93	95	94	95	95	95	96	97
Estimate GoC	•••	•••	•	•••	•••	••	••	••	••	••	•	•
Official	96	93	97	94	93	95	94	95	95	95	96	97
Administrative	96	93	97	94	93	94	94	95	95	95	96	97
Survey	NA	NA	97	NA								

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	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	96	95	97	97							
Estimate GoC	NA	••	••	•	•							
Official	NA	96	95	97	97							
Administrative	NA	96	95	97	97							
Survey	NA											

2016

2018

2020

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

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Description:

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

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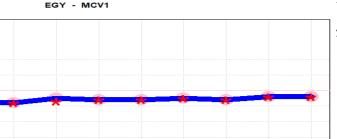
2021: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional five percent between 2020 and 2021 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about three percent between 2020 and 2021 but this decline is not reflected in the reported coverage. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. Estimate challenged by: D-

2020: Estimate informed by reported data. Reported numerator and denominator continues to decline since 2017. Decline is about an additional three percent between 2019 and 2020 for vaccines recommended in infancy. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. The denominator is the number of registered births in the target period according to the due date for each dose, GoC=R+D+

2019: Estimate informed by reported data. Reported numerator and denominator decline of about six percent between 2018 and 2019 for vaccines recommended in infancy. Vaccine introduction in July 2018. Reporting began in 2019. GoC=R+ D+

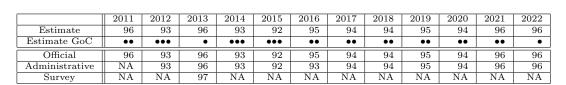
2012

2014



2018

2020



2016

WHO-UNICEF estimate
Official government estimate

Administrative coverage Survey, card or history

2012

8

8

8

9

20

Accepted survey, resolved value

2014

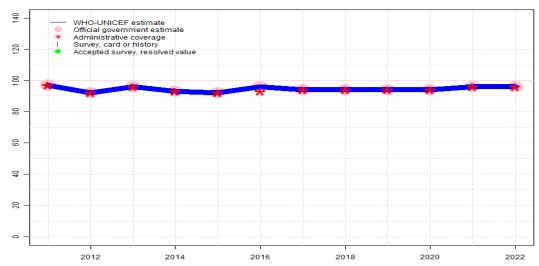
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- 2021: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional five percent between 2020 and 2021 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about three percent between 2020 and 2021 but this decline is not reflected in the reported coverage. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. GoC=R+ D+
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	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	97	92	96	93	92	96	94	94	94	94	96	96
Estimate GoC	•	••	•	••	••	••	••	••	••	••	••	•
Official	97	92	96	93	92	96	94	94	94	94	96	96
Administrative	97	92	96	93	92	93	94	94	94	94	96	96
Survey	NA											

- ••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
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- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

Coverage estimates for the second dose of measles containing vaccine are for children by the nationally recommended age.

2022: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional two percent between 2021 and 2022 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about one percent between 2021 and 2022 but this decline is not reflected in the reported coverage. Country indicates that digitalization of vaccination reporting has improved cross notification between vaccination centres. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Numerator declines are of about eight percent between 2021 and 2022 but this decline is not reflected in the reported coverage. Estimate challenged by: D-

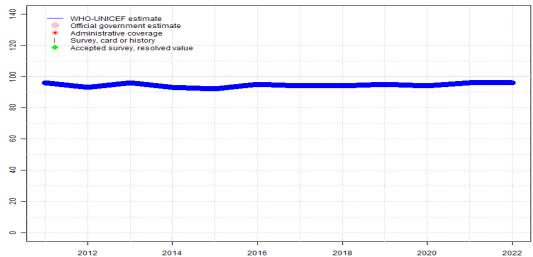
2021: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional five percent between 2020 and 2021 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about three percent between 2020 and 2021 but this decline is not reflected in the reported coverage. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. GoC=R+ D+

2020: Estimate informed by reported data. Reported numerator and denominator continues to decline since 2017. Decline is about an additional three percent between 2019 and 2020 for vaccines recommended in infancy. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. The denominator is the number of registered births in the target period according to the due date for each dose. GoC=R+D+

2019: Estimate informed by reported data. Reported numerator and denominator decline of about six percent between 2018 and 2019 for vaccines recommended in infancy. GoC=R+D+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. Estimate challenged by: D-
- 2012: Estimate informed by reported data. GoC=R+ D+
- 2011: Estimate informed by reported data. Estimate challenged by: D-





	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	96	93	96	93	92	95	94	94	95	94	96	96
Estimate GoC	••	•••	•	•••	•••	••	••	••	••	••	••	•
Official	NA											
Administrative	NA											
Survey	NA											

- ••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- •• Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

For this revision, coverage estimates for the first dose of rubella containing vaccine are based on WHO and UNICEF estimates of coverage of measles containing vaccine. Nationally reported coverage of rubella containing vaccine is not taken into consideration nor are they represented in the the accompanying graph and data table.

2022: Estimate based on estimated MCV1. Reported denominator continues to decline since 2017. Decline is about an additional two percent between 2021 and 2022 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about one percent between 2021 and 2022 but this decline is not reflected in the reported coverage. Country indicates that digitalization of vaccination reporting has improved cross notification between vaccination centres. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-

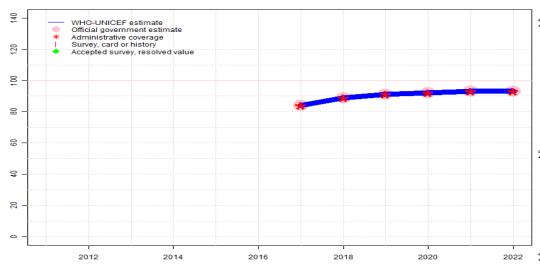
2021: Estimate based on estimated MCV1. Reported denominator continues to decline since 2017. Decline is about an additional five percent between 2020 and 2021 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about three percent between 2020 and 2021 but this decline is not reflected in the reported coverage. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. GoC=R+D+

2020: Estimate based on estimated MCV1. Reported numerator and denominator continues to decline since 2017. Decline is about an additional three percent between 2019 and 2020 for vaccines recommended in infancy. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. The denominator is the number of registered births in the target period according to the due date for each dose. GoC=R+D+

2019: Estimate based on estimated MCV1. Reported numerator and denominator decline of about six percent between 2018 and 2019 for vaccines recommended in infancy. GoC=R+D+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+S+D+
- 2014: Estimate based on estimated MCV1. GoC=R+S+D+
- 2013: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2012: Estimate based on estimated MCV1. GoC=R+S+D+
- 2011: Estimate based on estimated MCV1. GoC=R+S+



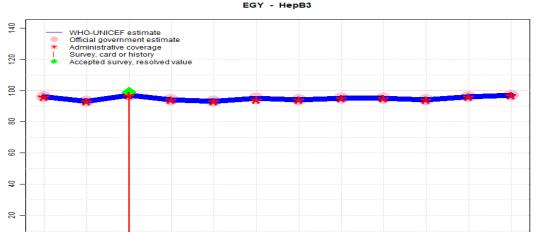


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	NA	84	89	91	92	93	93
Estimate GoC	NA	NA	NA	NA	NA	NA	••	••	••	••	•	••
Official	NA	NA	NA	NA	NA	NA	84	89	91	92	93	93
Administrative	NA	NA	NA	NA	NA	NA	84	89	91	92	93	93
Survey	NA											

- ••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 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.

- 2022: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional two percent between 2021 and 2022 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about one percent between 2021 and 2022 but this decline is not reflected in the reported coverage. Country indicates that digitalization of vaccination reporting has improved cross notification between vaccination centres. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+
- 021: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional five percent between 2020 and 2021 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about three percent between 2020 and 2021 but this decline is not reflected in the reported coverage. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Reported numerator and denominator continues to decline since 2017. Decline is about an additional three percent between 2019 and 2020 for vaccines recommended in infancy. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. The denominator is the number of registered births in the target period according to the due date for each dose. GoC=R+ D+
- 2019: Estimate informed by reported data. Reported numerator and denominator decline of about six percent between 2018 and 2019 for vaccines recommended in infancy. GoC=R+D+
- 2018: Estimate informed by reported data. GoC=R+ D+
- 2017: Estimate informed by reported data. Nationwide Hepatitis B introduction was in December 2016. Reporting started in 2017. GoC=R+ D+



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	96	93	97	94	93	95	94	95	95	94	96	97
Estimate GoC	•••	•••	•	•••	•••	••	••	••	••	••	•	•
Official	96	93	97	94	93	95	94	95	95	94	96	97
Administrative	96	93	97	94	93	94	94	95	95	94	96	97
Survey	NA	NA	97	NA								

2016

2018

2020

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: 2022 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.

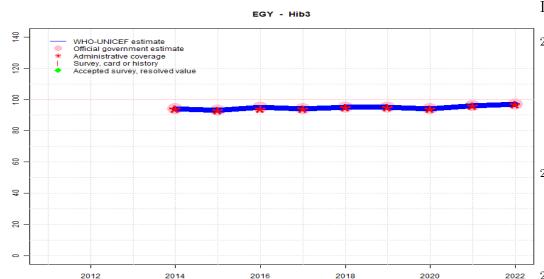
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2022: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional two percent between 2021 and 2022 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about one percent between 2021 and 2022 but this decline is not reflected in the reported coverage. Country indicates that digitalization of vaccination reporting has improved cross notification between vaccination centres. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 2011: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional five percent between 2020 and 2021 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about three percent between 2020 and 2021 but this decline is not reflected in the reported coverage. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Reported numerator and denominator continues to decline since 2017. Decline is about an additional three percent between 2019 and 2020 for vaccines recommended in infancy. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. The denominator is the number of registered births in the target period according to the due date for each dose. GoC=R+D+
- 2019: Estimate informed by reported data. Reported numerator and denominator decline of about six percent between 2018 and 2019 for vaccines recommended in infancy. 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+ S+ D+
- 2014: Estimate informed by reported data. GoC=R+S+D+
- 2013: Estimate informed by reported data supported by survey. Survey evidence of 99 percent based on 1 survey(s). Egypt Demographic and Health Survey, 2014 card or history results of 97 percent modified for recall bias to 99 percent based on 1st dose card or history coverage of 99 percent, 1st dose card only coverage of 58 percent and 3rd dose card only coverage of 58 percent. Estimate challenged by: D-
- 2012: Estimate informed by reported data. GoC=R+S+D+
- 2011: Estimate informed by reported data. GoC=R+ S+ D+

2012

2014



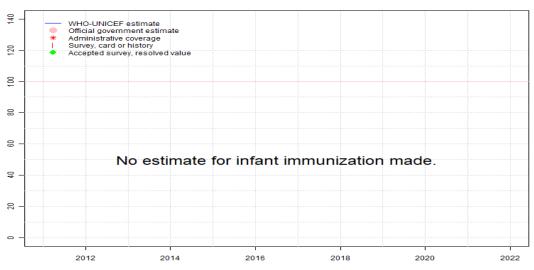
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	94	93	95	94	95	95	94	96	97
Estimate GoC	NA	NA	NA	••	••	••	••	••	••	••	•	•
Official	NA	NA	NA	94	93	95	94	95	95	94	96	97
Administrative	NA	NA	NA	94	93	94	94	95	95	94	96	97
Survey	NA											

- ••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 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.

- 2022: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional two percent between 2021 and 2022 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about one percent between 2021 and 2022 but this decline is not reflected in the reported coverage. Country indicates that digitalization of vaccination reporting has improved cross notification between vaccination centres. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: D-
- 021: Estimate informed by reported data. Reported denominator continues to decline since 2017. Decline is about an additional five percent between 2020 and 2021 for vaccines recommended in infancy. The denominator is the number of registered births in the target period according to the due date for each dose. Numerator declines are of about three percent between 2020 and 2021 but this decline is not reflected in the reported coverage. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. Estimate challenged by: D-
- 2020: Estimate informed by reported data. Reported numerator and denominator continues to decline since 2017. Decline is about an additional three percent between 2019 and 2020 for vaccines recommended in infancy. Country indicates that underestimation of the numerator might be due to late cross notification between vaccination centres. The denominator is the number of registered births in the target period according to the due date for each dose. GoC=R+D+
- 2019: Estimate informed by reported data. Reported numerator and denominator decline of about six percent between 2018 and 2019 for vaccines recommended in infancy. 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. Hib vaccine introduced during early 2014, yet reported data reflect the same number of doses delivered for Hib as for DTP containing vaccine. GoC=R+ D+



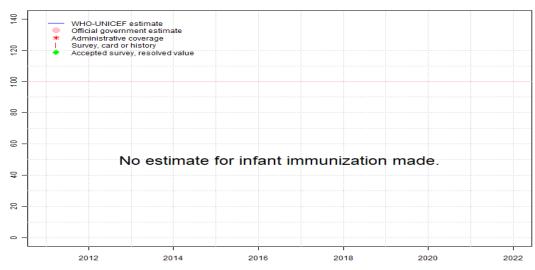


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA											
Estimate GoC	NA											
Official	NA											
Administrative	NA											
Survey	NA											

- ••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 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.





	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA											
Estimate GoC	NA											
Official	NA											
Administrative	NA											
Survey	NA											

- ••• Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 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 to 11 months) will sample children aged 12 to 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 to 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 1 or 2 years prior to the survey field work.

2013 Egypt Demographic and Health Survey, 2014

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H < 18 months	99.1	$18\text{-}29~\mathrm{m}$	3121	59
BCG	Card	58.1	$18\text{-}29~\mathrm{m}$	1829	59
BCG	Card or History	99.1	$18\text{-}29~\mathrm{m}$	3121	59
BCG	History	41	$18\text{-}29~\mathrm{m}$	1292	59
DTP1	C or H < 18 months	99.4	$18\text{-}29~\mathrm{m}$	3121	59
DTP1	Card	58.2	$18\text{-}29~\mathrm{m}$	1829	59
DTP1	Card or History	99.4	$18\text{-}29~\mathrm{m}$	3121	59
DTP1	History	41.2	$18\text{-}29~\mathrm{m}$	1292	59
DTP3	C or H < 18 months	96.2	$18\text{-}29~\mathrm{m}$	3121	59
DTP3	Card	57.5	$18\text{-}29~\mathrm{m}$	1829	59
DTP3	Card or History	97.1	$18\text{-}29~\mathrm{m}$	3121	59
DTP3	History	39.6	$18\text{-}29~\mathrm{m}$	1292	59
HepB1	C or H < 18 months	99.4	$18\text{-}29~\mathrm{m}$	3121	59
HepB1	Card	58.2	$18\text{-}29~\mathrm{m}$	1829	59
HepB1	Card or History	99.4	$18\text{-}29~\mathrm{m}$	3121	59
HepB1	History	41.2	$18\text{-}29~\mathrm{m}$	1292	59
HepB3	C or H < 18 months	96.2	$18\text{-}29~\mathrm{m}$	3121	59
HepB3	Card	57.5	$18\text{-}29~\mathrm{m}$	1829	59
HepB3	Card or History	97.1	$18\text{-}29~\mathrm{m}$	3121	59
HepB3	History	39.6	$18\text{-}29~\mathrm{m}$	1292	59
MCV1	C or H < 18 months	82	$18\text{-}29~\mathrm{m}$	3121	59
MCV1	Card	57.5	$18\text{-}29~\mathrm{m}$	1829	59
MCV1	Card or History	97.1	$18\text{-}29~\mathrm{m}$	3121	59
MCV1	History	39.6	$18-29 \mathrm{\ m}$	1292	59

Pol1	Card	58.6	$18-29~\mathrm{m}$	1829	59
Pol1	Card or History	98	$18-29~\mathrm{m}$	3121	59
Pol1	History	39.4	$18-29~\mathrm{m}$	1292	59
Pol3	Card	58.2	$18-29~\mathrm{m}$	1829	59
Pol3	Card or History	96.6	$18\text{-}29~\mathrm{m}$	3121	59
Pol3	History	38.4	$18-29 \mathrm{\ m}$	1292	59

2007 Egypt Demographic and Health Survey 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H $<$ 12 months	98.6	$12\text{-}23~\mathrm{m}$	2160	68
BCG	Card	67.7	$12\text{-}23~\mathrm{m}$	2160	68
BCG	Card or History	99	$12\text{-}23~\mathrm{m}$	2160	68
BCG	History	31.2	$12\text{-}23~\mathrm{m}$	2160	68
DTP1	C or H $<$ 12 months	99.8	$12\text{-}23~\mathrm{m}$	2160	68
DTP1	Card	68.5	$12\text{-}23~\mathrm{m}$	2160	68
DTP1	Card or History	99.8	$12\text{-}23~\mathrm{m}$	2160	68
DTP1	History	31.3	$12\text{-}23~\mathrm{m}$	2160	68
DTP3	C or H $<$ 12 months	97.3	$12\text{-}23~\mathrm{m}$	2160	68
DTP3	Card	68	$12\text{-}23~\mathrm{m}$	2160	68
DTP3	Card or History	97.6	$12\text{-}23~\mathrm{m}$	2160	68
DTP3	History	29.7	$12\text{-}23~\mathrm{m}$	2160	68
HepB1	C or H $<$ 12 months	99.3	$12\text{-}23~\mathrm{m}$	2160	68
HepB1	Card	68.3	$12\text{-}23~\mathrm{m}$	2160	68
HepB1	Card or History	99.3	$12\text{-}23~\mathrm{m}$	2160	68
HepB1	History	31	$12\text{-}23~\mathrm{m}$	2160	68
HepB3	C or H $<$ 12 months	95.7	$12\text{-}23~\mathrm{m}$	2160	68
HepB3	Card	67.4	$12\text{-}23~\mathrm{m}$	2160	68
HepB3	Card or History	96.1	$12\text{-}23~\mathrm{m}$	2160	68
HepB3	History	28.7	$12\text{-}23~\mathrm{m}$	2160	68
MCV1	C or H $<$ 12 months	96.6	$12\text{-}23~\mathrm{m}$	2160	68
MCV1	Card	67.2	$12\text{-}23~\mathrm{m}$	2160	68
MCV1	Card or History	98.3	$12\text{-}23~\mathrm{m}$	2160	68
MCV1	History	31.1	$12\text{-}23~\mathrm{m}$	2160	68
Pol1	C or H $<$ 12 months	99.8	$12\text{-}23~\mathrm{m}$	2160	68
Pol1	Card	68.5	$12\text{-}23~\mathrm{m}$	2160	68
Pol1	Card or History	99.8	$12\text{-}23~\mathrm{m}$	2160	68
Pol1	History	31.3	$12\text{-}23~\mathrm{m}$	2160	68
Pol3	C or H $<$ 12 months	94.2	$12\text{-}23~\mathrm{m}$	2160	68

Pol3	Card	68.1	$12\text{-}23~\mathrm{m}$	2160	68
Pol3	Card or History	94.5	$12\text{-}23~\mathrm{m}$	2160	68
Pol3	History	26.4	12-23 m	2160	68

2004 Egypt Demographic and Health Survey 2005

Vaccine	$Confirmation\ method$	Coverage	Age cohort	Sample	Cards seen
BCG	C or H < 12 months	98	$12\text{-}23 \mathrm{\ m}$	2680	73
BCG	Card	71.7	$12\text{-}23 \mathrm{\ m}$	2680	73
BCG	Card or History	98	$12\text{-}23 \mathrm{\ m}$	2680	73
BCG	History	26.3	$12\text{-}23~\mathrm{m}$	2680	73
DTP1	C or H $<$ 12 months	99	$12\text{-}23~\mathrm{m}$	2680	73
DTP1	Card	72.7	$12\text{-}23~\mathrm{m}$	2680	73
DTP1	Card or History	99.1	$12\text{-}23~\mathrm{m}$	2680	73
DTP1	History	26.4	$12\text{-}23~\mathrm{m}$	2680	73
DTP3	C or H $<$ 12 months	93.2	$12\text{-}23 \mathrm{\ m}$	2680	73
DTP3	Card	70.2	$12\text{-}23 \mathrm{\ m}$	2680	73
DTP3	Card or History	93.5	12-23 m	2680	73
DTP3	History	23.4	12-23 m	2680	73
HepB1	C or H <12 months	91.1	12-23 m	2680	73
HepB1	Card	67	12-23 m	2680	73
HepB1	Card or History	91.2	12-23 m	2680	73
HepB1	History	24.2	12-23 m	2680	73
HepB3	C or H <12 months	79.6	12-23 m	2680	73
HepB3	Card	60	12-23 m	2680	73
HepB3	Card or History	79.8	12-23 m	2680	73
HepB3	History	19.8	12-23 m	2680	73
MCV1	C or H <12 months	94.5	12-23 m	2680	73
MCV1	Card	70.5	$12-23 \mathrm{m}$	2680	73
MCV1	Card or History	96.6	12-23 m	2680	73
MCV1	History	26.1	12-23 m	2680	73
Pol1	C or \dot{H} <12 months	99.5	$12-23 \mathrm{m}$	2680	73
Pol1	Card	73.1	$12-23 \mathrm{m}$	2680	73
Pol1	Card or History	99.6	12-23 m	2680	73
Pol1	History	26.5	12-23 m	2680	73
Pol3	C or H <12 months	96.7	12-23 m	2680	73
Pol3	Card	71.4	12-23 m	2680	73
Pol3	Card or History	97	12-23 m	2680	73
Pol3	History	25.7	$12\text{-}23 \mathrm{\ m}$	2680	73

2002 Egypt Interim Demographic and Health Survey 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	99.1	$12\text{-}23~\mathrm{m}$	1192	74
DTP1	Card or History	99.6	$12\text{-}23~\mathrm{m}$	1192	74
DTP3	Card or History	92.6	$12\text{-}23~\mathrm{m}$	1192	74
HepB3	Card or History	79	$12\text{-}23~\mathrm{m}$	1192	74
MCV1	Card or History	95.6	$12\text{-}23~\mathrm{m}$	1192	74
Pol1	Card or History	99.7	$12\text{-}23~\mathrm{m}$	1192	74
Pol3	Card or History	93.3	$12\text{-}23~\mathrm{m}$	1192	74

1999 Egypt Demographic and Health Survey 2000, 2001

Vaccine	Confirmation method	${\bf Coverage}$	Age cohort	Sample	Cards seen
BCG	Card	72.1	$12\text{-}23 \mathrm{\ m}$	2170	72
BCG	Card or History	99.3	$12\text{-}23 \mathrm{\ m}$	2170	72
BCG	History	27.2	$12\text{-}23~\mathrm{m}$	2170	72
DTP1	Card	72.1	$12\text{-}23~\mathrm{m}$	2170	72
DTP1	Card or History	99.2	$12\text{-}23 \mathrm{\ m}$	2170	72
DTP1	History	27.1	$12\text{-}23~\mathrm{m}$	2170	72
DTP3	Card	70.5	$12\text{-}23~\mathrm{m}$	2170	72
DTP3	Card or History	94	$12\text{-}23~\mathrm{m}$	2170	72
DTP3	History	23.5	$12\text{-}23~\mathrm{m}$	2170	72
HepB3	Card	70	$12\text{-}23~\mathrm{m}$	2170	72
HepB3	Card or History	93	$12\text{-}23~\mathrm{m}$	2170	72
HepB3	History	23	$12\text{-}23~\mathrm{m}$	2170	72
MCV1	Card	70.4	$12\text{-}23~\mathrm{m}$	2170	72
MCV1	Card or History	96.9	$12\text{-}23 \mathrm{\ m}$	2170	72
MCV1	History	26.4	$12\text{-}23~\mathrm{m}$	2170	72
Pol1	Card	72.3	$12\text{-}23~\mathrm{m}$	2170	72
Pol1	Card or History	99.6	$12\text{-}23 \mathrm{\ m}$	2170	72
Pol1	History	27.3	$12\text{-}23~\mathrm{m}$	2170	72
Pol3	Card	70.5	$12\text{-}23~\mathrm{m}$	2170	72
Pol3	Card or History	94.9	$12\text{-}23 \mathrm{\ m}$	2170	72
Pol3	History	24.4	$12\text{-}23~\mathrm{m}$	2170	72

1998 Egypt	Demographic	and	Health	Survey	2000.	2001
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Vaccine	Confirmation method	Coverage	Age cohort	Sample	${\bf Cards\ seen}$
BCG	C or H $<$ 12 months	98.5	$24\text{-}35~\mathrm{m}$	2209	72
DTP1	C or H $<$ 12 months	98.7	$24\text{-}35~\mathrm{m}$	2209	72
DTP3	C or H $<$ 12 months	92.6	$24\text{-}35~\mathrm{m}$	2209	72
HepB3	C or H $<$ 12 months	91.8	$24-35~\mathrm{m}$	2209	72
MCV1	C or H $<$ 12 months	89.3	$24-35~\mathrm{m}$	2209	72
Pol1	C or H $<$ 12 months	99.1	$24\text{-}35~\mathrm{m}$	2209	72
Pol3	C or H < 12 months	93.2	$24-35 \mathrm{m}$	2209	72

1997 Egypt Demographic and Health Survey 1998

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	98.1	$12\text{-}23~\mathrm{m}$	837	65
DTP1	Card or History	98.4	$12\text{-}23~\mathrm{m}$	837	65
DTP3	Card or History	87.5	$12\text{-}23 \mathrm{\ m}$	837	65

HepB1	Card or History	94	$12\text{-}23~\mathrm{m}$	837	65
HepB3	Card or History	81.4	$12\text{-}23 \mathrm{\ m}$	837	65
MCV1	Card or History	93.1	12-23 m	837	65
Pol1	Card or History	99.5	$12\text{-}23 \mathrm{\ m}$	837	65
Pol3	Card or History	89.6	12-23 m	837	65

1997 Egypt Demographic and Health Survey 2000, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	${\bf Cards\ seen}$
BCG	C or H $<$ 12 months	98	$36\text{-}47~\mathrm{m}$	2126	72
DTP1	C or H $<$ 12 months	97.6	$36\text{-}47~\mathrm{m}$	2126	72
DTP3	C or H $<$ 12 months	90.4	$36\text{-}47~\mathrm{m}$	2126	72
HepB3	C or H $<$ 12 months	89.3	$36\text{-}47~\mathrm{m}$	2126	72
MCV1	C or H $<$ 12 months	84.4	$36\text{-}47~\mathrm{m}$	2126	72
Pol1	C or H $<$ 12 months	98.1	$36\text{-}47~\mathrm{m}$	2126	72
Pol3	C or H $<$ 12 months	91	$36-47~\mathrm{m}$	2126	72

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Further information and estimates for previous years are available at:

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

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