Haiti: WHO and UNICEF estimates of immunization coverage: 2022 revision

WHO and UNICEF estimates of national immunization coverage - next revision available July 15, 2024   data received as of June 26, 2023

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. 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 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.
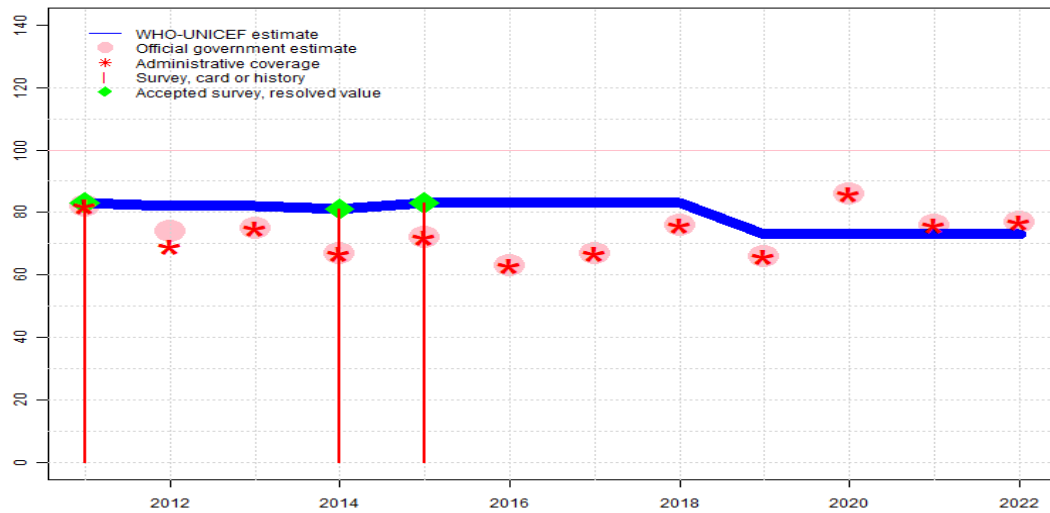
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect 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.

Haiti - BCG

HTI - BCG

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	83	82	82	81	83	83	83	83	73	73	73	73
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	82	74	75	67	72	63	67	76	66	86	76	77
Administrative	82	69	75	67	72	63	67	76	66	86	76	77
Survey	83	NA	NA	81	83	NA	NA	NA	NA	NA	NA	NA

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: Reported data calibrated to 2018 levels. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: R-

2021: Reported data calibrated to 2018 levels. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Programme reports one month vaccine stockout at national level. Estimate challenged by: R-

2020: Reported data calibrated to 2018 levels. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. Programme reports a one month vaccine stockout at national and subnational levels. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate challenged by: R-

2018: Estimate of 83 percent assigned by working group. Estimate based on survey results from 2015. Estimate challenged by: R-

2017: Estimate informed by interpolation between 2016 and 2018 levels. Estimate informed by 2015 survey results. Estimate challenged by: R-

2016: Estimate of 83 percent assigned by working group. Estimate based on survey results. Estimate challenged by: R-

2015: Estimate of 83 percent assigned by working group. Estimate based on survey results. Programme reports vaccine stockout at national level. Estimate challenged by: R-

2014: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 81 percent based on 1 survey(s). Programme reports a two months stockout of BCG syringes at national level. Estimate challenged by: R-

2013: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Programme reports six months stockout of AD syringes at national level. Estimate challenged by: R-
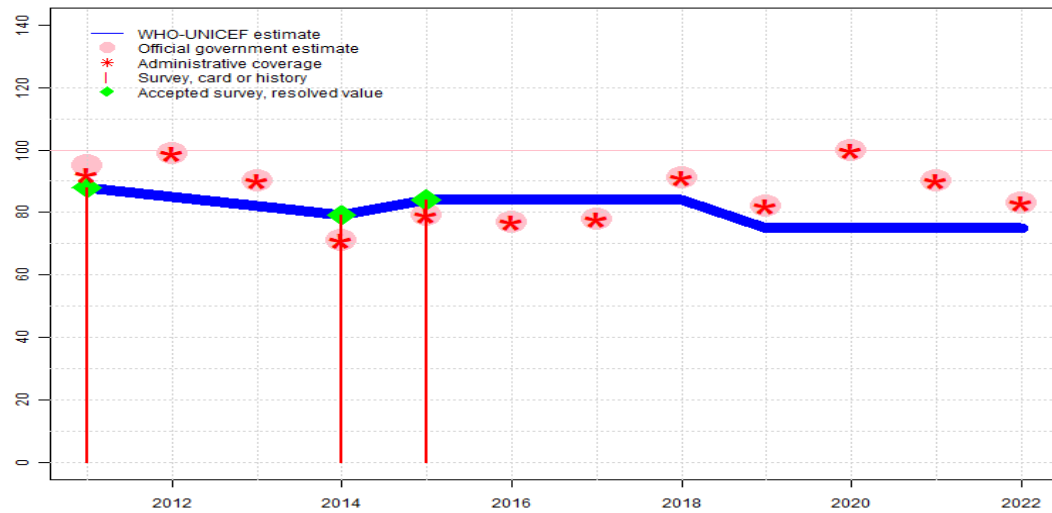
2012: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Vaccine stockout for 5 months in all districts. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Estimate challenged by: R-

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 83 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-

Haiti - DTP1

HTI - DTP1

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	88	85	82	79	84	84	84	84	75	75	75	75
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	95	99	90	71	79	77	78	91	82	100	90	83
Administrative	92	99	90	71	79	77	78	91	82	100	90	83
Survey	88	NA	NA	79	84	NA	NA	NA	NA	NA	NA	NA

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.
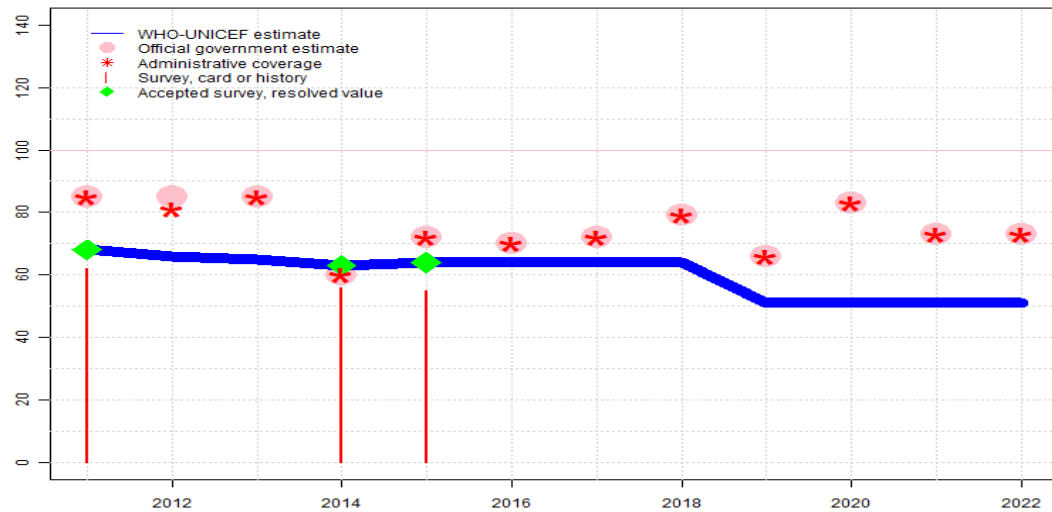
Description:

2022: Reported data calibrated to 2018 levels. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. Programme reports five month vaccine stockout at national and subnational levels. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: D-R-

2021: Reported data calibrated to 2018 levels. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Estimate challenged by: D-R-

2020: Reported data calibrated to 2018 levels. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate challenged by: D-R-

2018: Estimate of 84 percent assigned by working group. Estimate based on 2015 survey results. Estimate challenged by: D-R-

2017: Estimate informed by interpolation between 2015 and 2018 levels. NA Estimate challenged by: R-

2016: Estimate informed by interpolation between 2015 and 2018 levels. NA Estimate challenged by: R-

2015: Estimate of 84 percent assigned by working group. Estimate based on survey results. Programme appears to have recovered from prior year vaccine stockout. Estimate challenged by: R-

2014: Estimate of 79 percent assigned by working group. Estimate based on survey results. Programme reports a one month stockout at national level. Estimate challenged by: R-

2013: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Programme reports six months stockout of AD syringes at national level. Estimate challenged by: D-R-

2012: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in

reported data suggest poor quality administrative recording and reporting. Pentavalent DTP-HepB-Hib vaccine introduced during 2012. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Estimate challenged by: D-R-

2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 88 percent based on 1 survey(s). Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: D-R-

Haiti - DTP3

HTI - DTP3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	68	66	65	63	64	64	64	64	51	51	51	51
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	85	85	85	60	72	70	72	79	66	83	73	73
Administrative	85	81	85	60	72	70	72	79	66	83	73	73
Survey	62	NA	NA	56	55	NA	NA	NA	NA	NA	NA	NA

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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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●●● 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.

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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.
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Description:

2022: Reported data calibrated to 2018 levels. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. Programme reports five month vaccine stockout at national and subnational levels. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: D-R-

2021: Reported data calibrated to 2018 levels. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Estimate challenged by: D-R-

2020: Reported data calibrated to 2018 levels. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Consistency with other antigens suggesting a decline in coverage. Estimate challenged by: D-R-

2018: Estimate of 64 percent assigned by working group. Estimate based on survey results. Estimate challenged by: D-R-

2017: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Estimate challenged by: D-R-

2016: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Estimate challenged by: D-R-

2015: Estimate of 64 percent assigned by working group. Estimate based on survey results. Programme appears to have recovered from prior year stockout. Haiti Demographic and Health Survey 2016-2017 card or history results of 55 percent modifed for recall bias to 64 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 64 percent and 3rd dose card only coverage of 49 percent. Estimate challenged by: D-R-

2014: Estimate of 63 percent assigned by working group. Estimate based on survey results. Haiti Demographic and Health Survey 2016-2017 card or history results of 56 percent modifed for recall bias to 63 percent based on 1st dose card or history coverage of 79 percent, 1st dose card only coverage of 55 percent and 3rd dose card only coverage of 44 percent. Reported data excluded due to decline in reported coverage from 85 percent

to 60 percent with increase to 72 percent. Programme reports a one month stockout at national level. Estimate challenged by: R-

2013: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Programme reports six months stockout of AD syringes at national level. Estimate challenged by: D-R-
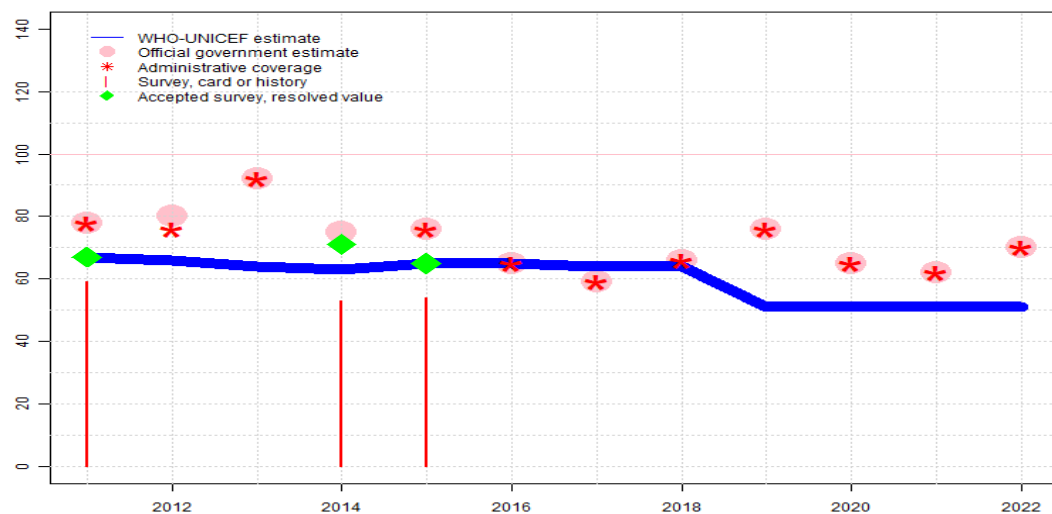
2012: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Pentavalent DTP-HepB-Hib vaccine introduced during 2012. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Estimate challenged by: D-R-

2011: Estimate of 68 percent assigned by working group. Estimate is based on survey result. Survey on Mortality, Morbidity and Service Utilisation, Haiti 2012 card or history results of 62 percent modifed for recall bias to 68 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 70 percent and 3rd dose card only coverage of 54 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: D-R-

Haiti - Pol3

HTI - Pol3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	67	66	64	63	65	65	64	64	51	51	51	51
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	78	80	92	75	76	65	59	66	76	65	62	70
Administrative	78	76	92	NA	76	65	59	66	76	65	62	70
Survey	59	NA	NA	53	54	NA	NA	NA	NA	NA	NA	NA

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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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●●● 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.

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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.
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Description:

2022: Estimate informed by estimated DTP3 level. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: D-R-

2021: Estimate based on estimated DTP3 level. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Estimate challenged by: D-R-

2020: Estimate based on estimated DTP3 level. Programme reports a four months oral polio vaccine stockout at national and subnational levels. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. Estimate challenged by: D-R-

2019: Estimate is based on estimated DTP3 coverage. Reported data are inconsistent with that for other antigens and may include doses administered during an SIA. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate challenged by: D-R-

2018: Estimate of 64 percent assigned by working group. Estimate based on survey results. Estimate challenged by: D-R-

2017: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Programme reports a two months stockout at the national level. Estimate challenged by: R-

2016: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Estimate of 65 percent changed from previous revision value of 64 percent. Estimate challenged by: D-R-

2015: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 65 percent based on 1 survey(s). Haiti Demographic and Health Survey 2016-2017 card or history results of 54 percent modifed for recall bias to 65 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 65 percent and 3rd dose card only coverage of 50 percent. Estimate of 65 percent changed from previous revision value of 64 percent. Estimate challenged by: D-R-

2014: Estimate of 63 percent assigned by working group. Estimate is based on difference between administrative coverage between 2013 and 2014 applied to the estimate for 2013. Haiti

Demographic and Health Survey 2016-2017 card or history results of 53 percent modifed for recall bias to 71 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 57 percent and 3rd dose card only coverage of 48 percent. Estimate challenged by: R-

2013: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting.Reported data excluded due to an increase from 80 percent to 92 percent with decrease 75 percent. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Programme reports six months stockout of AD syringes at national level. Estimate challenged by: D-R-

2012: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Vaccine stockout for one month. Estimate challenged by: D-R-

2011: Estimate informed by interpolation between reported data supported by survey. Survey evidence of 67 percent based on 1 survey(s). Survey on Mortality, Morbidity and Service Utilisation, Haiti 2012 card or history results of 59 percent modifed for recall bias to 67 percent based on 1st dose card or history coverage of 91 percent, 1st dose card only coverage of 72 perce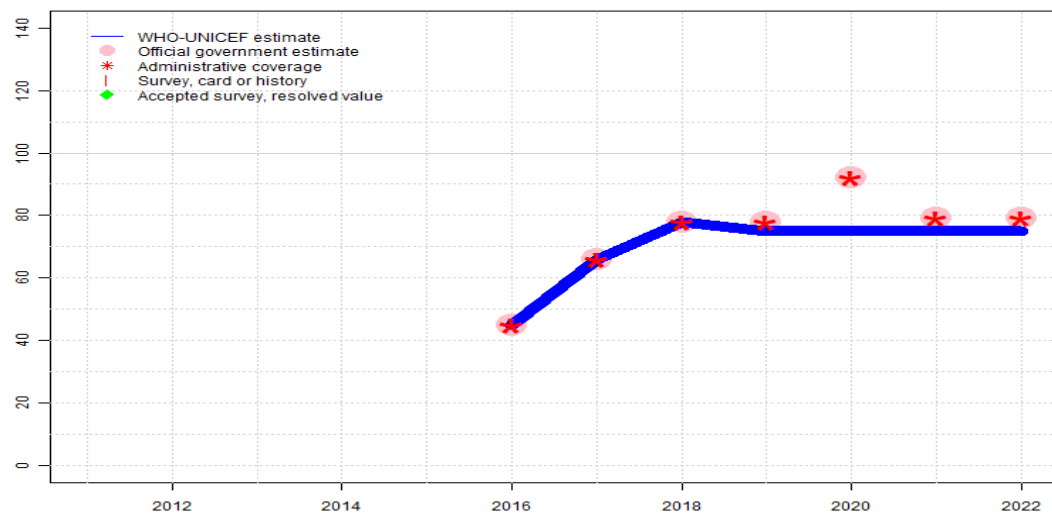nt and 3rd dose card only coverage of 53 percent. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: D-

Haiti - IPV1

HTI - IPV1

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	45	66	78	75	75	75	75
Estimate GoC	NA	NA	NA	NA	NA	●	●	●	●	●	●	●
Official	NA	NA	NA	NA	NA	45	66	78	78	92	79	79
Administrative	NA	NA	NA	NA	NA	45	66	78	78	92	79	79
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

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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:

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).

2022: Reported data calibrated to 2019 levels. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: R-

2021: Reported data calibrated to 2019 levels. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Programme reports three months vaccine stockout at national level. Estimate challenged by: R-

2020: Reported data calibrated to 2019 levels. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes.Reported data excluded due to an increase from 78 percent to 92 percent with decrease 79 percent. Programme reports a one month vaccine stockout at national and subnational levels. Estimate challenged by: D-R-

2019: Estimate of 75 percent assigned by working group. Estimate is based on estimated DTP1 coverage. IPV1 recommended for administration at 6 weeks of age, similar to DTP1. Reported number of IPV1 doses administered is lower than that for DTP1, and thus estimated coverage may be an overestimate. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate challenged by: D-R-
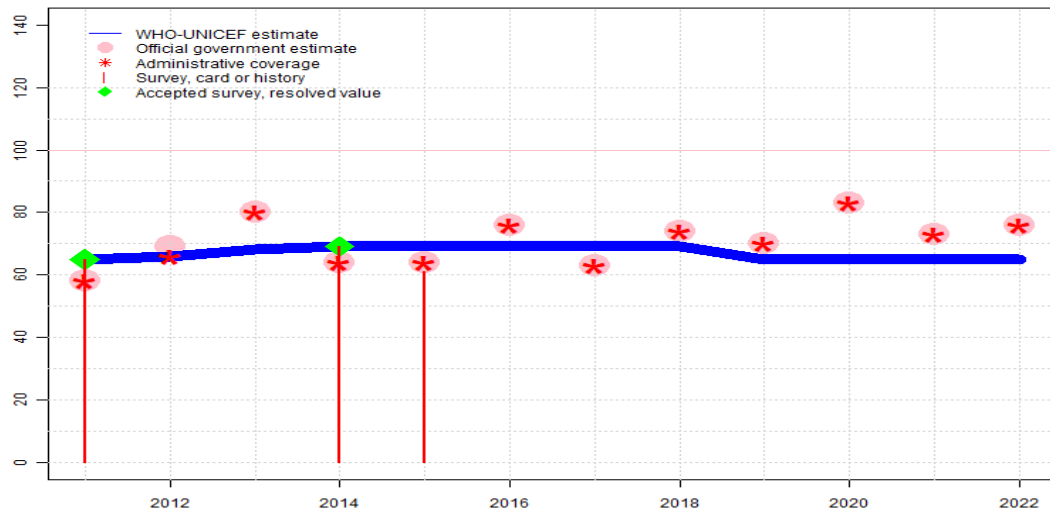
2018: . Estimate is based on reported data on an exceptional basis following introduction. Estimate challenged by: D-R-

2017: . Estimate is based on reported data on an exceptional basis following introduction. Estimate challenged by: D-R-

2016: . Estimate challenged by: R-

Haiti - MCV1

HTI - MCV1

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	65	66	68	69	69	69	69	69	65	65	65	65
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	58	69	80	64	64	76	63	74	70	83	73	76
Administrative	58	66	80	64	64	76	63	74	70	83	73	76
Survey	65	NA	NA	69	61	NA	NA	NA	NA	NA	NA	NA

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: Reported data calibrated to 2018 levels. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: D-R-

2021: Reported data calibrated to 2018 levels. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Estimate challenged by: R-

2020: Reported data calibrated to 2018 levels. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate challenged by: D-R-

2018: Estimate of 69 percent assigned by working group. Estimate based survey results. Estimate challenged by: D-R-

2017: Estimate informed by interpolation between 2014 and 2018 levels. Estimate based survey results. Reported data excluded due to decline in reported coverage from 76 percent to 63 percent with increase to 74 percent. Estimate challenged by: R-

2016: Estimate informed by interpolation between 2014 and 2018 levels. Estimate based survey results. Reported data excluded due to an increase from 64 percent to 76 percent with decrease 63 percent. Estimate challenged by: D-R-

2015: Estimate informed by interpolation between 2014 and 2018 levels. Estimate based survey results. Haiti Demographic and Health Survey 2016-2017 results ignored by working group. Survey results likely do not reflect delayed vaccination for MCV. Estimate challenged by: R-

2014: Estimate of 69 percent assigned by working group. Estimate based survey results. Programme reports a two months stockout at national level. Estimate challenged by: R-

2013: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting.Reported data excluded due to an increase from 69 percent to 80 percent with decrease 64 percent. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage

estimates. Programme reports six months stockout of AD syringes at national level. Estimate challenged by: D-R-

2012: Reported data calibrated to 2011 and 2014 levels. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Vaccine stockout for one month in all districts. Estimate challenged by: R-

2011: Estimate of 65 percent assigned by working group. Estimate based on Survey level. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. Estimate challenged by: R-

Haiti - MCV2

HTI - MCV2
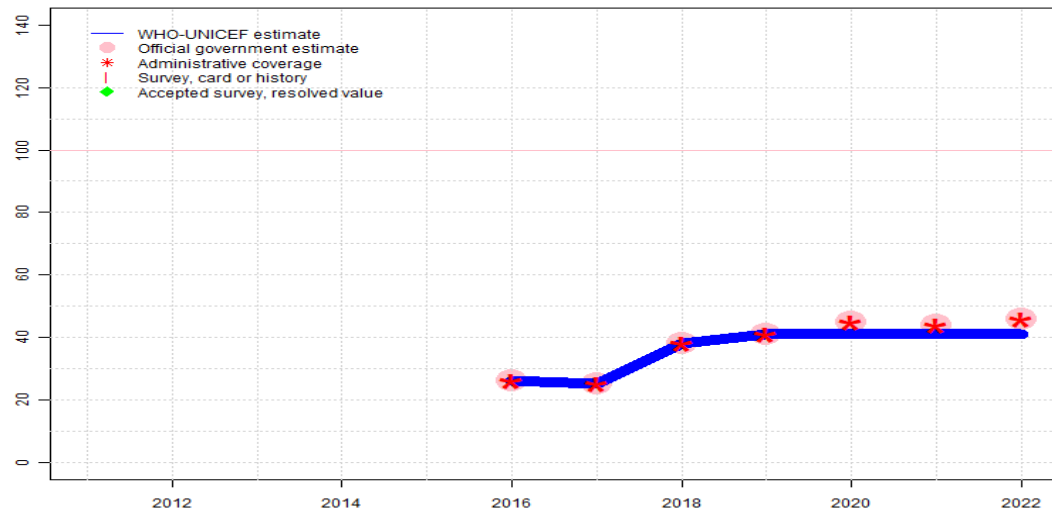
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	26	25	38	41	41	41	41
Estimate GoC	NA	NA	NA	NA	NA	●	●	●	●	●	●	●
Official	NA	NA	NA	NA	NA	26	25	38	41	45	44	46
Administrative	NA	NA	NA	NA	NA	26	25	38	41	45	44	46
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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:

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

2022: Estimate informed by extrapolation from reported data. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. GoC=Assigned by working group. Consistency with other antigens.

2021: Estimate informed by extrapolation from reported data. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. GoC=Assigned by working group. Consistency with other antigens.

2020: Estimate based on previous year estimate. Number of doses reported declines in 2020 compared to 2019. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. GoC=Assigned by working group. Consistency with other antigens.

2019: Estimate informed by reported data. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate is exceptionally based on reported data. GoC=Assigned by working group. Consistency with other antigens.

2018: Estimate informed by reported data. Estimate is exceptionally based on reported data following introduction. GoC=Assigned by working group. Consistency with other antigens.

2017: Estimate informed by reported data. Estimate is exceptionally based on reported data following introduction. GoC=Assigned by working group. Consistency with other antigens.

2016: Estimate informed by reported data. Second dose of measles-rubella vaccine introduced in 2016. Country reports 26 percent coverage in 94 percent of the birth cohort. Coverage estimate recalculated to 24 percent for the entire birth cohort. GoC=Assigned by working group. Consistency with other antigens.

Haiti - RCV1

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	65	66	68	69	69	69	69	69	65	65	65	65
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	69	61	NA	NA	NA	NA	NA	NA	NA

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:

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. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: D-R-

2021: Estimate based on estimated MCV1. Estimate challenged by: R-

2020: Estimate based on estimated MCV1. Estimate challenged by: D-R-

2019: Estimate based on estimated MCV1. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate challenged by: D-R-

2018: Estimate based on estimated MCV1. Estimate challenged by: D-R-

2017: Estimate based on estimated MCV1. Estimate challenged by: R-

2016: Estimate based on estimated MCV1. Estimate challenged by: D-R-

2015: Estimate based on estimated MCV1. Estimate challenged by: R-

2014: Estimate based on estimated MCV1. Estimate challenged by: R-

2013: Estimate based on estimated MCV1. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Programme reports six months stockout of AD syringes at national level. Estimate challenged by: D-R-

2012: Estimate based on estimated MCV1. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Estimate challenged by: R-

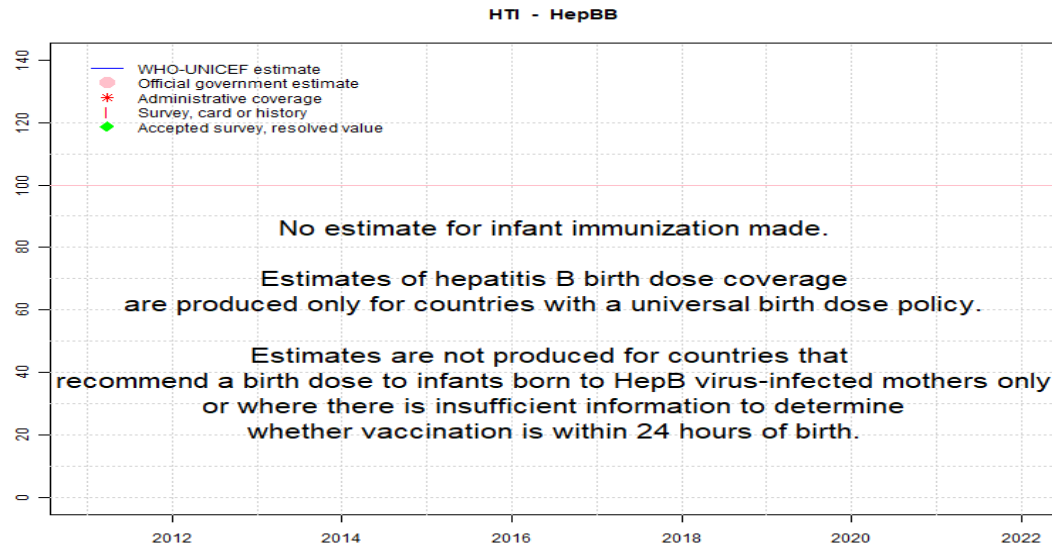2011: Estimate based on estimated MCV1. Estimate challenged by: R-

HTI - HepBB

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

No estimate for infant immunization made.

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.

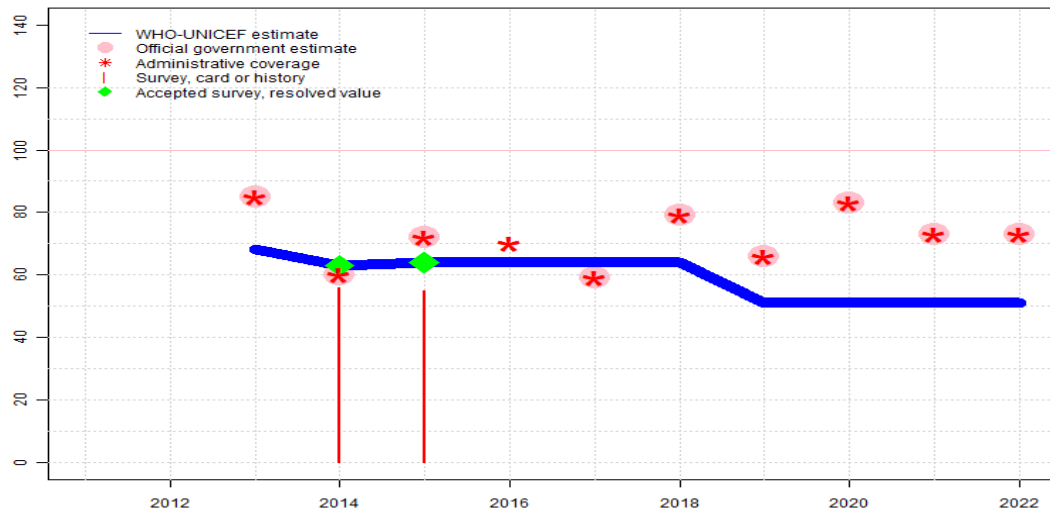|	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

Haiti - HepB3

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	68	63	64	64	64	64	51	51	51	51
Estimate GoC	NA	NA	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	85	60	72	NA	59	79	66	83	73	73
Administrative	NA	NA	85	60	72	70	59	79	66	83	73	73
Survey	NA	NA	NA	56	55	NA	NA	NA	NA	NA	NA	NA

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 estimated DTP3 level. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: D-R-

2021: Estimate based on estimated DTP3. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Estimate challenged by: D-R-

2020: Estimate based on estimated DTP3. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. Estimate challenged by: D-R-

2019: Estimate based on estimated DTP3. Reported data excluded due to decline in reported coverage from 79 percent to 66 percent with increase to 83 percent. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate challenged by: D-R-

2018: Estimate of 64 percent assigned by working group. Estimate is based on difference in administrative coverage between 2013 and 2014 applied to the estimate for 2013. Reported data excluded due to an increase from 59 percent to 79 percent with decrease 66 percent. Estimate challenged by: D-R-

2017: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Reported data excluded due to decline in reported coverage from 70 percent to 59 percent with increase to 79 percent. Estimate challenged by: R-

2016: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Estimate challenged by: D-R-

2015: Estimate of 64 percent assigned by working group. Programme recovered from prior year stockout. Haiti Demographic and Health Survey 2016-2017 card or history results of 55 percent modifed for recall bias to 64 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 64 percent and 3rd dose card only coverage of 49 percent. . Estimate challenged by: D-R-

2014: Estimate of 63 percent assigned by working group. Estimate is based on difference between administrative coverage between 2013 and 2014 applied to the estimate for 2013. Haiti Demographic and Health Survey 2016-2017 card or history results of 56 percent modifed

for recall bias to 63 percent based on 1st dose card or history coverage of 79 percent, 1st dose card only coverage of 55 percent and 3rd dose card only coverage of 44 percent. Programme reports a one month stockout at national level.. Estimate challenged by: R-2013: Pentavalent DTP-HepB-Hib vaccine introduced during 2012, reporting started in 2013. Estimate follows DTP3 coverage. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Programme reports six months stockout of AD syringes at national level. Estimate challenged by: D-R-

Haiti - Hib3

HTI - Hib3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	68	63	64	64	64	64	51	51	51	51
Estimate GoC	NA	NA	●	●	●	●	●	●	●	●	●	●
Official	NA	NA	85	60	72	NA	59	79	66	83	73	73
Administrative	NA	NA	85	60	72	70	59	79	66	83	73	73
Survey	NA	NA	NA	56	55	NA	NA	NA	NA	NA	NA	NA

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 estimated DTP3 level. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: D-R-

2021: Estimate based on estimated DTP3. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Estimate challenged by: D-R-

2020: Estimate based on estimated DTP3. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. Estimate challenged by: D-R-

2019: Estimate based on estimated DTP3. Reported data excluded due to decline in reported coverage from 79 percent to 66 percent with increase to 83 percent. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate challenged by: D-R-

2018: Estimate of 64 percent assigned by working group. Estimate based on survey results. Programme appears to have recovered from prior year vaccine stockout. Reported data excluded due to an increase from 59 percent to 79 percent with decrease 66 percent. Estimate challenged by: D-R-

2017: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Reported data excluded due to decline in reported coverage from 70 percent to 59 percent with increase to 79 percent. Estimate challenged by: R-

2016: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Estimate challenged by: D-R-

2015: Estimate of 64 percent assigned by working group. Estimate based on survey results. Programme appears to have recovered from prior year vaccine stockout. Haiti Demographic and Health Survey 2016-20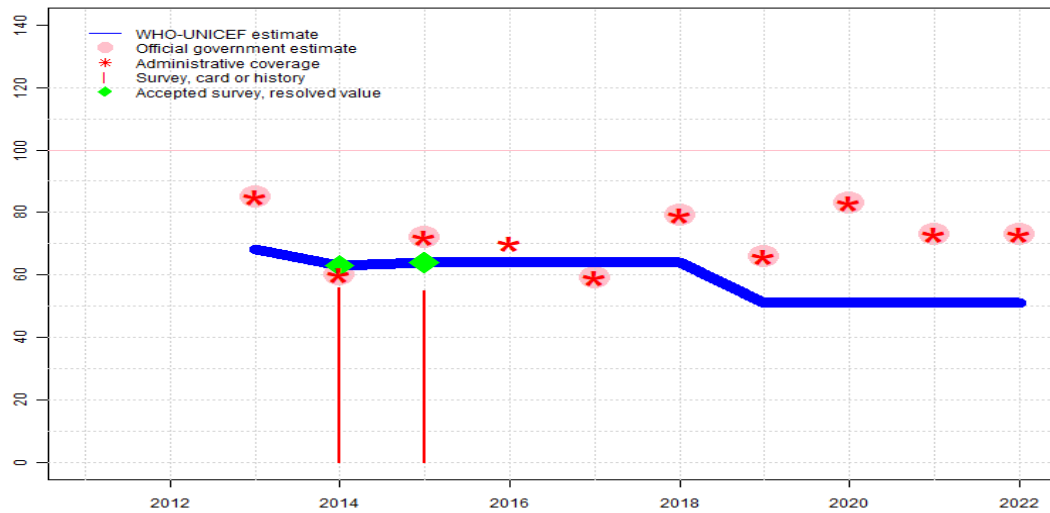17 card or history results of 55 percent modifed for recall bias to 64 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 64 percent and 3rd dose card only coverage of 49 percent. . Estimate challenged by: D-R-

2014: Estimate of 63 percent assigned by working group. Estimate based on survey results. Haiti Demographic and Health Survey 2016-2017 card or history results of 56 percent modifed

for recall bias to 63 percent based on 1st dose card or history coverage of 79 percent, 1st dose card only coverage of 55 percent and 3rd dose card only coverage of 44 percent. Programme reports a one month stockout at national level.. Estimate challenged by: R- 2013: Pentavalent DTP-HepB-Hib vaccine introduced during 2012, reporting started in 2013. Estimate follows DTP3 coverage. Reported data excluded. Fluctuations in reported data suggest poor quality administrative recording and reporting. The Ministry of Health, Haiti does not agree with the WHO and UNICEF coverage estimates. Programme reports six months stockout of AD syringes at national level. Estimate challenged by: D-R-

Haiti - RotaC

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	23	58	58	58	58	48	48	48	48
Estimate GoC	NA	NA	NA	●	●	●	●	●	●	●	●	●
Official	NA	NA	NA	40	55	60	68	73	63	83	69	56
Administrative	NA	NA	NA	40	55	60	68	73	63	83	69	56
Survey	NA	NA	NA	51	58	NA	NA	NA	NA	NA	NA	NA

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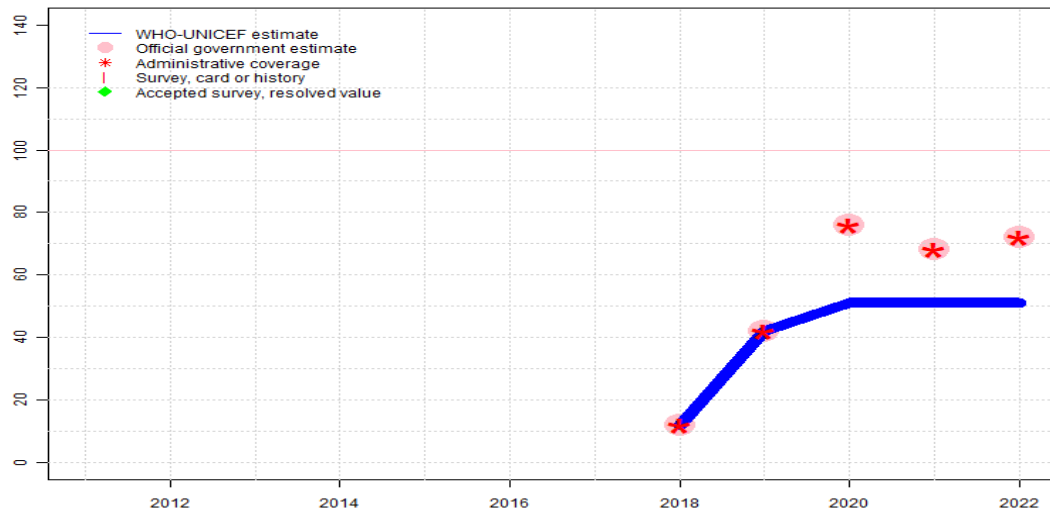
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2022: Reported data calibrated to 2018 levels. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. Reported data excluded due to decline in reported coverage from 69 level to 56 percent. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Programme reports two months vaccine stockout. Estimate challenged by: D-R-

2021: Reported data calibrated to 2018 levels. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Programme reports two months vaccine stockout at national level. Estimate challenged by: D-R-

2020: Reported data calibrated to 2018 levels. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. Reported data excluded due to an increase from 63 percent to 83 percent with decrease 69 percent. Estimate challenged by: D-R-

2019: Reported data calibrated to 2018 levels. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate challenged by: D-R-

2018: Estimate of 58 percent assigned by working group. Estimate based on survey results. Estimate challenged by: D-R-

2017: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Estimate challenged by: D-R-

2016: Estimate informed by interpolation between 2015 and 2018 levels. Estimate based on survey results. Estimate challenged by: D-R-

2015: Estimate of 58 percent assigned by working group. Estimate based on survey results. Estimate challenged by: R-

2014: Programme reports 40 percent coverage for 58 percent of the target population. Estimate based on coverage achieved in total annual national target population. Rotavirus vaccine introduced during 2014. Estimate challenged by: R-S-

HTI - PcV3

Legend:
- WHO-UNICEF estimate
- Official government estimate
- Administrative coverage
- Survey, card or history
- Accepted survey, resolved value

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Estimate	NA	NA	NA	NA	NA	NA	NA	12	42	51	51	51
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	●	●●	●	●	●
Official	NA	NA	NA	NA	NA	NA	NA	12	42	76	68	72
Administrative	NA	NA	NA	NA	NA	NA	NA	12	42	76	68	72
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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 estimated DTP3 level. Reported data excluded. Concerns remain with regards to reported data. See comments for 2021. Estimated coverage levels for the past three years do not reflect patterns in reported number of doses administered for some antigens. As, such estimated coverage levels may overestimate actual coverage. No nationally representative vaccination coverage survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage as the country situation permits. Estimate challenged by: D-R-

2021: Estimate based on estimated DTP3 level. Reported data excluded. Due to a confluence of multiple factors impacting programme performance (number and quality of trained staff, monitoring sessions, and data quality) related to the COVID-19 pandemic, persistent instability as well as revisions to reported target population in 2020 (a decrease of 14 percent). Programme reports two months stockout of reconstitution syringes. Estimate challenged by: D-R-

2020: Estimate based on estimated DTP3 level. Reported data excluded. Increase in reported coverage between 2019 and 2020 for some antigens reflects an decrease in the reported target population. Programme reports a 12 month stockout of reconstitution syringes. Estimate challenged by: D-R-

2019: Estimate informed by reported data. Country reports a disruption of health service delivery due to socio-political disturbances. WHO and UNICEF recommend continued focus on improved recording and monitoring of immunization service delivery and periodic independent coverage assessment in addition to improving coverage of immunization services. Programme reports a stockout of disposable syringes. Estimate is based on reported data on an exceptional basis following introduction. GoC=R+ D+

2018: Estimate informed by reported data. Pneumococcal conjugate vaccine introduced in November 2018. Estimate challenged by: D-

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.

2015 Haïti Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI) 2016-2017

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	81.9	12-23 m	1131	68
BCG	Card	62.4	12-23 m	773	68
BCG	Card or History	82.8	12-23 m	1131	68
BCG	History	20.4	12-23 m	357	68
DTP1	C or H <12 months	82.3	12-23 m	1131	68
DTP1	Card	64.5	12-23 m	773	68
DTP1	Card or History	83.5	12-23 m	1131	68
DTP1	History	19.1	12-23 m	357	68
DTP3	C or H <12 months	53.3	12-23 m	1131	68
DTP3	Card	49	12-23 m	773	68
DTP3	Card or History	55.3	12-23 m	1131	68
DTP3	History	6.3	12-23 m	357	68
HepB1	C or H <12 months	82.3	12-23 m	1131	68
HepB1	Card	64.5	12-23 m	773	68
HepB1	Card or History	83.5	12-23 m	1131	68
HepB1	History	19.1	12-23 m	357	68
HepB3	C or H <12 months	53.3	12-23 m	1131	68
HepB3	Card	49	12-23 m	773	68
HepB3	Card or History	55.3	12-23 m	1131	68
HepB3	History	6.3	12-23 m	357	68
Hib1	C or H <12 months	82.3	12-23 m	1131	68
Hib1	Card	64.5	12-23 m	773	68
Hib1	Card or History	83.5	12-23 m	1131	68
Hib1	History	19.1	12-23 m	357	68
Hib3	C or H <12 months	53.3	12-23 m	1131	68
Hib3	Card	49	12-23 m	773	68
Hib3	Card or History	55.3	12-23 m	1131	68
Hib3	History	6.3	12-23 m	357	68
MCV1	C or H <12 months	52.8	12-23 m	1131	68
MCV1	Card	48	12-23 m	773	68
MCV1	Card or History	61	12-23 m	1131	68
MCV1	History	13.1	12-23 m	357	68
Pol1	C or H <12 months	83.3	12-23 m	1131	68
Pol1	Card	64.7	12-23 m	773	68
Pol1	Card or History	84.3	12-23 m	1131	68
Pol1	History	19.7	12-23 m	357	68
Pol3	C or H <12 months	52.9	12-23 m	1131	68
Pol3	Card	50.3	12-23 m	773	68
Pol3	Card or History	54.4	12-23 m	1131	68
Pol3	History	4.1	12-23 m	357	68
RotaC	C or H <12 months	56.9	12-23 m	1131	68
RotaC	Card	50.9	12-23 m	773	68
RotaC	Card or History	58.1	12-23 m	1131	68
RotaC	History	7.1	12-23 m	357	68

2014 Haïti Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI) 2016-2017

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	80.7	24-35 m	1181	68
BCG	Card	53.6	24-35 m	695	68
BCG	Card or History	81.3	24-35 m	1181	68
BCG	History	27.7	24-35 m	486	68
DTP1	C or H <12 months	77.2	24-35 m	1181	68
DTP1	Card	54.6	24-35 m	695	68
DTP1	Card or History	79.3	24-35 m	1181	68
DTP1	History	24.8	24-35 m	486	68
DTP3	C or H <12 months	50.9	24-35 m	1181	68
DTP3	Card	43.9	24-35 m	695	68
DTP3	Card or History	55.6	24-35 m	1181	68
DTP3	History	11.7	24-35 m	486	68
HepB1	C or H <12 months	77.2	24-35 m	1181	68

HepB1	Card	54.6	24-35 m	695	68
HepB1	Card or History	79.3	24-35 m	1181	68
HepB1	History	24.8	24-35 m	486	68
HepB3	C or H <12 months	50.9	24-35 m	1181	68
HepB3	Card	43.9	24-35 m	695	68
HepB3	Card or History	55.6	24-35 m	1181	68
HepB3	History	11.7	24-35 m	486	68
Hib1	C or H <12 months	77.2	24-35 m	1181	68
Hib1	Card	54.6	24-35 m	695	68
Hib1	Card or History	79.3	24-35 m	1181	68
Hib1	History	24.8	24-35 m	486	68
Hib3	C or H <12 months	50.9	24-35 m	1181	68
Hib3	Card	43.9	24-35 m	695	68
Hib3	Card or History	55.6	24-35 m	1181	68
Hib3	History	11.7	24-35 m	486	68
MCV1	C or H <24 months	47.5	24-35 m	1181	68
MCV1	Card	47	24-35 m	695	68
MCV1	Card or History	68.7	24-35 m	1181	68
MCV1	History	21.7	24-35 m	486	68
Pol1	C or H <12 months	80	24-35 m	1181	68
Pol1	Card	57.2	24-35 m	695	68
Pol1	Card or History	83.5	24-35 m	1181	68
Pol1	History	26.3	24-35 m	486	68
Pol3	C or H <12 months	48.1	24-35 m	1181	68
Pol3	Card	47.5	24-35 m	695	68
Pol3	Card or History	53.1	24-35 m	1181	68
Pol3	History	5.6	24-35 m	486	68
RotaC	C or H <12 months	48.1	24-35 m	1181	68
RotaC	Card	37.3	24-35 m	695	68
RotaC	Card or History	50.6	24-35 m	1181	68
RotaC	History	13.2	24-35 m	486	68

2011 Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-V), Haiti 2012

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	80.6	12-23 m	1288	73
BCG	Card	64.6	12-23 m	943	73
BCG	Card or History	82.7	12-23 m	1288	73

BCG	History	18.1	12-23 m	345	73
DTP1	C or H <12 months	83.4	12-23 m	1288	73
DTP1	Card	70.1	12-23 m	943	73
DTP1	Card or History	87.9	12-23 m	1288	73
DTP1	History	17.8	12-23 m	345	73
DTP3	C or H <12 months	54.9	12-23 m	1288	73
DTP3	Card	54.1	12-23 m	943	73
DTP3	Card or History	62.5	12-23 m	1288	73
DTP3	History	8.4	12-23 m	345	73
MCV1	C or H <12 months	38	12-23 m	1288	73
MCV1	Card	51.2	12-23 m	943	73
MCV1	Card or History	65.1	12-23 m	1288	73
MCV1	History	13.9	12-23 m	345	73
Pol1	C or H <12 months	83.8	12-23 m	1288	73
Pol1	Card	71.9	12-23 m	943	73
Pol1	Card or History	90.6	12-23 m	1288	73
Pol1	History	18.7	12-23 m	345	73
Pol3	C or H <12 months	51.3	12-23 m	1288	73
Pol3	Card	53.2	12-23 m	943	73
Pol3	Card or History	58.6	12-23 m	1288	73
Pol3	History	5.4	12-23 m	345	73

2008 Vaccination Coverage in Haiti: Results from the 2009 National Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	54.5	12-23 m	1345	62
DTP1	Card	57.5	12-23 m	1345	62
DTP3	Card	46.7	12-23 m	1345	62
MCV1	Card	29.3	12-23 m	1345	62
Pol1	Card	58.3	12-23 m	1345	62
Pol3	Card	46	12-23 m	1345	62

2005 Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-IV), Haiti 2005-2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	73.2	12-23 m	1135	73
BCG	Card	60	12-23 m	1135	73

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	74.9	12-23 m	1135	73
BCG	History	14.9	12-23 m	1135	73
DTP1	C or H <12 months	77.9	12-23 m	1135	73
DTP1	Card	68.2	12-23 m	1135	73
DTP1	Card or History	83	12-23 m	1135	73
DTP1	History	14.9	12-23 m	1135	73
DTP3	C or H <12 months	47.9	12-23 m	1135	73
DTP3	Card	48.7	12-23 m	1135	73
DTP3	Card or History	53	12-23 m	1135	73
DTP3	History	4.3	12-23 m	1135	73
MCV1	C or H <12 months	45.3	12-23 m	1135	73
MCV1	Card	49.1	12-23 m	1135	73
MCV1	Card or History	57.7	12-23 m	1135	73
MCV1	History	8.6	12-23 m	1135	73
Pol1	C or H <12 months	81	12-23 m	1135	73
Pol1	Card	70.1	12-23 m	1135	73
Pol1	Card or History	85.5	12-23 m	1135	73
Pol1	History	15.4	12-23 m	1135	73
Pol3	C or H <12 months	47	12-23 m	1135	73
Pol3	Card	48.6	12-23 m	1135	73
Pol3	Card or History	51.5	12-23 m	1135	73
Pol3	History	2.9	12-23 m	1135	73

1999 Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-III),
Haiti 2000, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	67.6	12-23 m	1225	66
BCG	Card	53.2	12-23 m	1225	66
BCG	Card or History	71	12-23 m	1225	66
BCG	History	17.7	12-23 m	1225	66
DTP1	C or H <12 months	71	12-23 m	1225	66
DTP1	Card	60.5	12-23 m	1225	66
DTP1	Card or History	76	12-23 m	1225	66
DTP1	History	15.4	12-23 m	1225	66
DTP3	C or H <12 months	36.2	12-23 m	1225	66
DTP3	Card	37.2	12-23 m	1225	66
DTP3	Card or History	42.9	12-23 m	1225	66
DTP3	History	5.7	12-23 m	1225	66
MCV1	C or H <12 months	34.3	12-23 m	1225	66
MCV1	Card	44.1	12-23 m	1225	66
MCV1	Card or History	53.9	12-23 m	1225	66
MCV1	History	9.8	12-23 m	1225	66
Pol1	C or H <12 months	71.9	12-23 m	1225	66
Pol1	Card	61.2	12-23 m	1225	66
Pol1	Card or History	76.6	12-23 m	1225	66
Pol1	History	15.4	12-23 m	1225	66
Pol3	C or H <12 months	37.5	12-23 m	1225	66
Pol3	Card	38.5	12-23 m	1225	66
Pol3	Card or History	42.9	12-23 m	1225	66
Pol3	History	4.4	12-23 m	1225	66

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