

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.

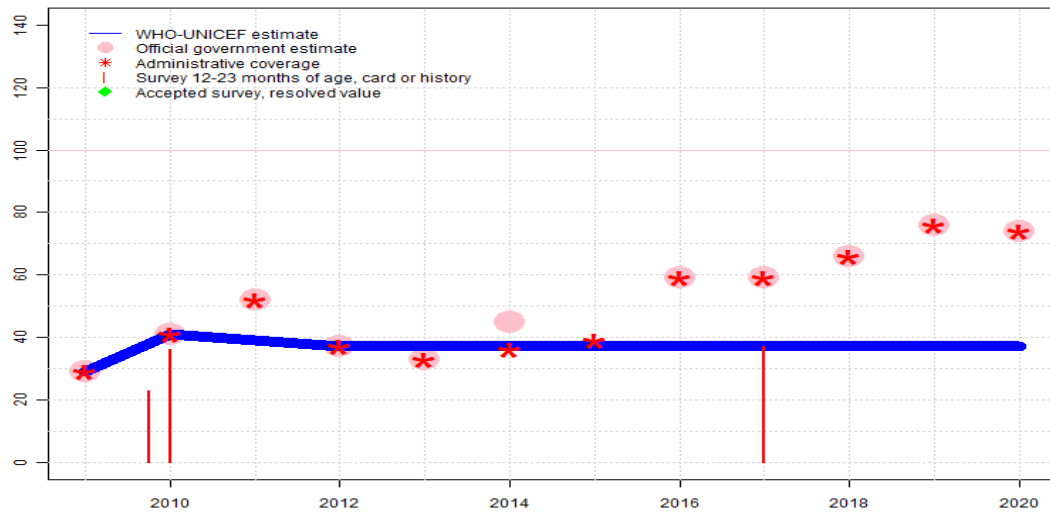
PcV3: percentage of surviving infants who received the 3rd dose of pneumococcal conjugate vaccine. In countries where the national schedule recommends two doses during infancy and a booster dose at 12 months or later based on the epidemiology of disease in the country, coverage estimates may reflect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

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Somalia - BCG

SOM - BCG



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	29	41	39	37	37	37	37	37	37	37	37	37
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	29	41	52	37	33	45	NA	59	59	66	76	74
Administrative	29	41	52	37	33	36	39	59	59	66	76	74
Survey	NA	*	NA	NA	NA	NA	NA	NA	37	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: 2020 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:

- 2020: Estimate based on extrapolation from data reported by national government. Reported data excluded. Incomplete reporting noted by the country. WHO and UNICEF encourage periodic independent coverage assessment in addition to improving the coverage of immunization services. Programme reports a two month vaccine stock-out at national and subnational levels. Estimate challenged by: D-
- 2019: Estimate based on extrapolation from data reported by national government. Reported data excluded. WHO and UNICEF are aware of discussions related to organizing a working group to further assess and guide immunization system performance data improvement activities focused on improved recording and monitoring of immunization service delivery. Estimate challenged by: D-
- 2018: Estimate based on extrapolation from data reported by national government. Reported data excluded. See comment in 2019. Estimate challenged by: D-
- 2017: Estimate based on extrapolation from data reported by national government. The Somali Health and Demographic Survey 2020 results ignored by working group. Lower vaccination coverage levels suggested by the survey for the 2017 cohort are consistent with challenges in funding around delivery of the country's Essential Package of Health Services through the Somali Joint Health and Nutrition Program (JHNP), a multi-donor fund managed by UNICEF that aimed to strengthen the health system and service delivery across Somalia. The JHNP ended in December 2016. Survey results are based mostly on respondent recall of vaccination history given only four percent with available documented evidence in a home-based record. In contrast to prior surveys noted here, the 2017 survey incorporated three strata within the sampling process targeting urban, rural and nomadic communities. Exceptionally low vaccination coverage estimates among children residing in nomadic communities is observed and thus lowers the national coverage levels. Reported data excluded. See comment in 2019. Survey coverage for BCG vaccine is unusually high given levels of home birth in Somalia accompanied by weak and fragmented primary healthcare service delivery. Estimate challenged by: D-
- 2016: Estimate based on extrapolation from data reported by national government. Reported data excluded. See comment in 2019. Estimate challenged by: D-
- 2015: Estimate based on extrapolation from data reported by national government. Reported data excluded. Unexplained increase in target population compared to 2014. Programme reports a national level stock-out of two months. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in coverage is due in part to incomplete reporting. Programme reports a 2 month stock-out at national level. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Decline in coverage is likely

Somalia - BCG

attributable to vaccine shortage. Estimate challenged by: D-

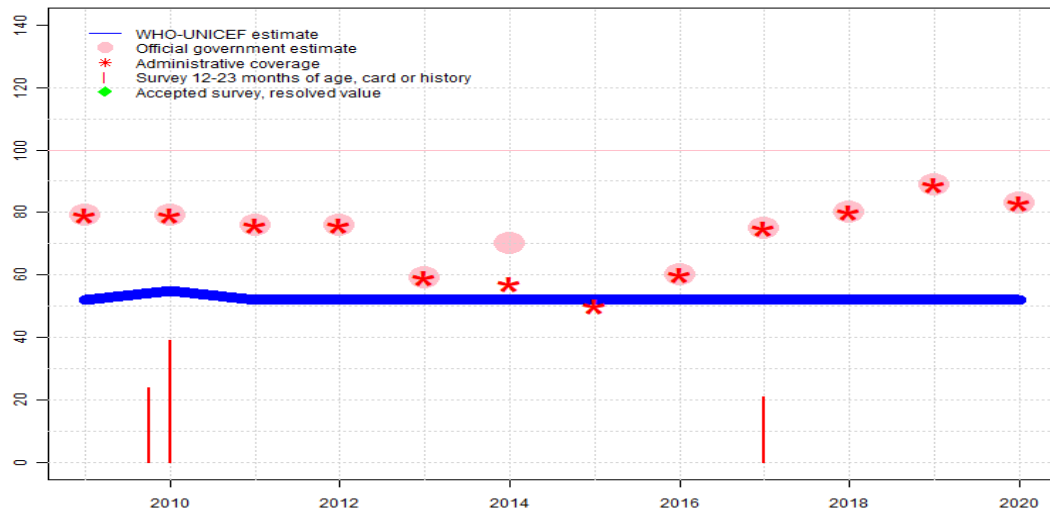
2011: Estimate based on interpolation between data reported by national government. Reported data excluded due to an increase from 41 percent to 52 percent with decrease 37 percent. GoC=Assigned by working group. Consistency with other antigens.

2010: Estimate is based on reported data. Northeast Zone, Somalia Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Somaliland Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Beginning in 2009, to complement the currently weak routine immunization service, Somalia also offers selected vaccines through semi-annual Child Health Days (CHDs); BCG, however, was not offered in CHDs. Reported data and WHO and UNICEF estimate includes only coverage reached through routine services. Estimate challenged by: D-

2009: Estimate based on coverage reported by national government. Beginning in 2009, to complement the currently weak routine immunization service, Somalia also offers selected vaccines through semi-annual Child Health Days (CHDs); BCG, however, was not offered in CHDs. Reported data and WHO and UNICEF estimate includes only coverage reached through routine services. Estimate challenged by: D-

Somalia - DTP1

SOM - DTP1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	52	55	52	52	52	52	52	52	52	52	52	52
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	79	79	76	76	59	70	NA	60	75	80	89	83
Administrative	79	79	76	76	59	57	50	60	75	80	89	83
Survey	NA	*	NA	NA	NA	NA	NA	NA	21	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: 2020 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:

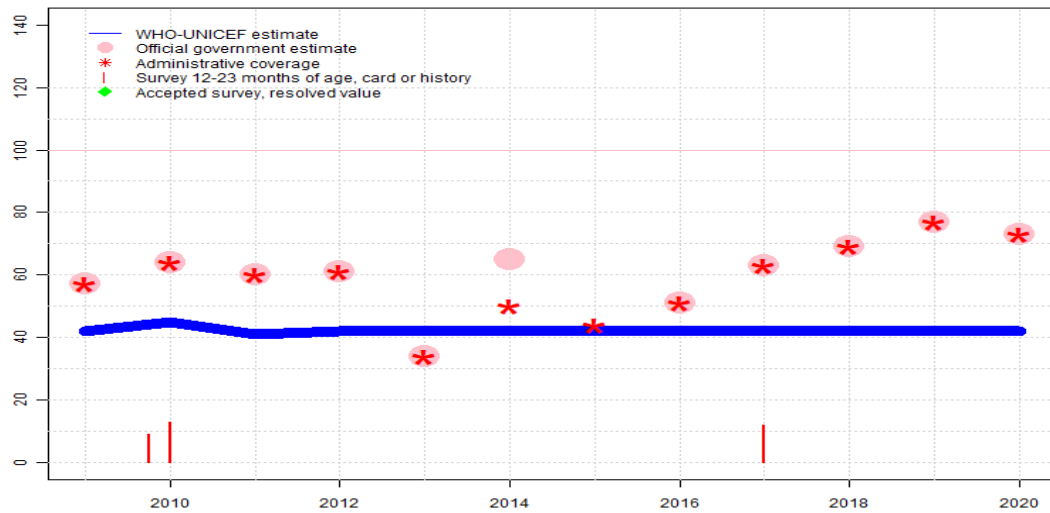
- 2020: Reported data calibrated to 2010 levels. Reported data excluded. Incomplete reporting noted by the country. WHO and UNICEF encourage periodic independent coverage assessment in addition to improving the coverage of immunization services. Programme reports a two month vaccine stock-out at national and subnational levels. Estimate challenged by: D-R-
- 2019: Reported data calibrated to 2010 levels. Reported data excluded. WHO and UNICEF are aware of discussions related to organizing a working group to further assess and guide immunization system performance data improvement activities focused on improved recording and monitoring of immunization service delivery. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2010 levels. Reported data excluded. See comment in 2019. Estimate challenged by: D-R-
- 2017: Reported data calibrated to 2010 levels. The Somali Health and Demographic Survey 2020 results ignored by working group. Lower vaccination coverage levels suggested by the survey for the 2017 cohort are consistent with challenges in funding around delivery of the country's Essential Package of Health Services through the Somali Joint Health and Nutrition Program (JHNP), a multi-donor fund managed by UNICEF that aimed to strengthen the health system and service delivery across Somalia. The JHNP ended in December 2016. Survey results are based mostly on respondent recall of vaccination history given only four percent with available documented evidence in a home-based record. In contrast to prior surveys noted here, the 2017 survey incorporated three strata within the sampling process targeting urban, rural and nomadic communities. Exceptionally low vaccination coverage estimates among children residing in nomadic communities is observed and thus lowers the national coverage levels. Reported data excluded. See comment in 2019. Estimate challenged by: D-R-
- 2016: Reported data calibrated to 2010 levels. Reported data excluded. See comment in 2019. Estimate challenged by: R-
- 2015: Reported data calibrated to 2010 levels. Reported data excluded. Unexplained increase in target population compared to 2014. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2014: Reported data calibrated to 2010 levels. Reported data excluded. Decline in coverage is due in part to incomplete reporting. Reported data excluded due to an increase from 59 percent to 70 percent with decrease 50 percent. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2013: Reported data calibrated to 2010 levels. Reported data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone. Reported data excluded due to decline in reported coverage from 76 percent to 59 percent with increase to 70 percent. DTP-HepB-Hib pentavalent vaccine introduced in April 2013. Decline in reported coverage reflects a reduction in scope of Child Health Days and incomplete reporting from the Central-South zone. Estimate challenged by: D-R-
- 2012: Reported data calibrated to 2010 levels. See comment from previous year. Estimate challenged by: R-

Somalia - DTP1

- 2011: Reported data calibrated to 2010 levels. Routine immunization is delivered through fixed sites complemented by Child Health Days (CHD). This strategy of supplementing the routine immunization has been in place for the last 4 years; and has contributed to the improvement of immunization coverage. Estimate challenged by: R-
- 2010: Estimate of 55 percent assigned by working group. Beginning in 2008, to complement weak routine immunization services, Somalia offers DTP to children less than one year of age through semi-annual Child Health Days (CHDs). Coverage reported by the Government of Somalia includes immunizations delivered through routine services as well as through CHDs. Because reported coverage is based only on documented immunizations some DTP1 doses may be second or third doses. While Somalia reports routine doses of DTP disaggregated by routine services and CHDs, no data were provided for the number of DTP1 doses delivered through routine services. The WHO and UNICEF estimate is based on the observed dropout between DTP1 and DTP3 in 2010 where data from both DTP1 and DTP3 were available. There is, however, considerable uncertainty of at least plus or minus 10 percentage points regarding coverage estimates due to uncertainty in the number of children in the target population, the most recent Somali census was conducted in 1987, and the difficulty of coordinating recording and reporting between CHD activities and routine services. It is important to note that immunizations provided through CHDs provide significant levels of protection against vaccine preventable diseases and are an important strategy in reaching children in this still fragile state. Northeast Zone, Somalia Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Somaliland Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Estimate challenged by: R-
- 2009: Estimate of 52 percent assigned by working group. Beginning in 2008, to complement weak routine immunization services, Somalia offers DTP to children less than one year of age through semi-annual Child Health Days (CHDs). Coverage reported by the Government of Somalia includes immunizations delivered through routine services as well as through CHDs. Because reported coverage is based only on documented immunizations some DTP1 doses may be second or third doses. While Somalia reports routine doses of DTP disaggregated by routine services and CHDs, no data were provided for the number of DTP1 doses delivered through routine services. The WHO and UNICEF estimate is based on the observed dropout between DTP1 and DTP3 in 2010 where data from both DTP1 and DTP3 were available. There is, however, considerable uncertainty of at least plus or minus 10 percentage points regarding coverage estimates due to uncertainty in the number of children in the target population, the most recent Somali census was conducted in 1987, and the difficulty of coordinating recording and reporting between CHD activities and routine services. It is important to note that immunizations provided through CHDs provide significant levels of protection against vaccine preventable diseases and are an important strategy in reaching children in this still fragile state. Estimate challenged by: R-

Somalia - DTP3

SOM - DTP3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	42	45	41	42	42	42	42	42	42	42	42	42
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	57	64	60	61	34	65	NA	51	63	69	77	73
Administrative	57	64	60	61	34	50	44	51	63	69	77	73
Survey	NA	*	NA	NA	NA	NA	NA	NA	12	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: 2020 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:

- 2020: Reported data calibrated to 2010 levels. Reported data excluded. Incomplete reporting noted by the country. WHO and UNICEF encourage periodic independent coverage assessment in addition to improving the coverage of immunization services. Programme reports a two month vaccine stock-out at national and subnational levels. Estimate challenged by: D-R-
- 2019: Reported data calibrated to 2010 levels. Reported data excluded. WHO and UNICEF are aware of discussions related to organizing a working group to further assess and guide immunization system performance data improvement activities focused on improved recording and monitoring of immunization service delivery. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2010 levels. Reported data excluded. See comment in 2019. Estimate challenged by: D-R-
- 2017: Reported data calibrated to 2010 levels. The Somali Health and Demographic Survey 2020 results ignored by working group. Lower vaccination coverage levels suggested by the survey for the 2017 cohort are consistent with challenges in funding around delivery of the country's Essential Package of Health Services through the Somali Joint Health and Nutrition Program (JHNP), a multi-donor fund managed by UNICEF that aimed to strengthen the health system and service delivery across Somalia. The JHNP ended in December 2016. Survey results are based mostly on respondent recall of vaccination history given only four percent with available documented evidence in a home-based record. In contrast to prior surveys noted here, the 2017 survey incorporated three strata within the sampling process targeting urban, rural and nomadic communities. Exceptionally low vaccination coverage estimates among children residing in nomadic communities is observed and thus lowers the national coverage levels. Reported data excluded. See comment in 2019. Estimate challenged by: D-R-
- 2016: Reported data calibrated to 2010 levels. Reported data excluded. See comment in 2019. Estimate challenged by: R-
- 2015: Reported data calibrated to 2010 levels. Reported data excluded. Unexplained increase in target population compared to 2014. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2014: Reported data calibrated to 2010 levels. Reported data excluded. Decline in coverage is due in part to incomplete reporting. Reported data excluded due to an increase from 34 percent to 65 percent with decrease 44 percent. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2013: Reported data calibrated to 2010 levels. Reported data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone. Reported data excluded due to decline in reported coverage from 61 percent to 34 percent with increase to 65 percent. DTP-HepB-Hib pentavalent vaccine introduced in April 2013. Decline in reported coverage reflects a reduction in scope of Child Health Days and incomplete reporting from the Central-South zone. Estimate challenged by: D-R-
- 2012: Reported data calibrated to 2010 levels. See comment from previous year. Estimate challenged by: R-

Somalia - DTP3

2011: Reported data calibrated to 2010 levels. Routine immunization is delivered through fixed sites complemented by Child Health Days (CHD). This strategy of supplementing the routine immunization has been in place for the last 4 years; and has contributed to the improvement of immunization coverage. Estimate challenged by: R-

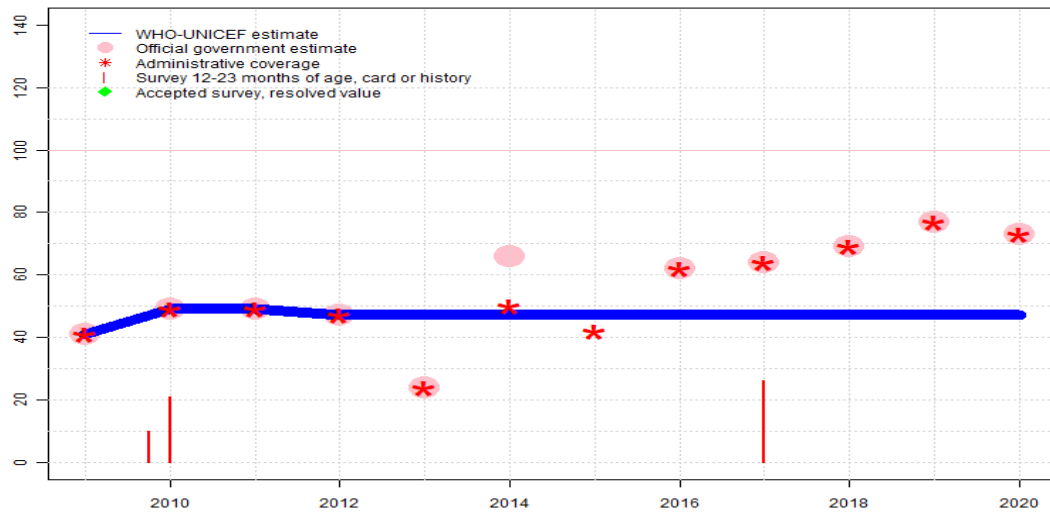
2010: Estimate of 45 percent assigned by working group. Beginning in 2008, to complement weak routine immunization services, Somalia offers DTP to children less than one year of age through semi-annual Child Health Days (CHDs). Coverage reported by the Government of Somalia includes immunizations delivered through routine services as well as through CHDs. Because reported coverage is based only on documented immunizations some DTP1 doses may be second or third doses. While Somalia reports routine doses of DTP disaggregated by routine services and CHDs, no data were provided for the number of DTP1 doses delivered through routine services. The WHO and UNICEF estimate is based on the observed dropout between DTP1 and DTP3 in 2010 where data from both DTP1 and DTP3 were available. There is, however, considerable uncertainty of at least plus or minus 10 percentage points regarding coverage estimates due to uncertainty in the number of children in the target population, the most recent Somali census was conducted in 1987, and the difficulty of coordinating recording and reporting between CHD activities and routine services. It is important to note that immunizations provided through CHDs provide significant levels of protection against vaccine preventable diseases and are an important strategy in reaching children in this still fragile state. Northeast Zone, Somalia Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Somaliland Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Northeast Zone, Somalia Multiple Indicator Cluster Survey 2011 card or history results of 9 percent modified for recall bias to 12 percent based on 1st dose card or history coverage of 24 percent, 1st dose card only coverage of 8 percent and 3rd dose card only coverage of 4 percent. Somaliland Multiple Indicator Cluster Survey 2011 card or history results of 13 percent modified for recall bias to 18 percent based on 1st dose card or history coverage of 39 percent, 1st dose card only coverage of 15 percent and 3rd dose card only coverage of 7 percent. Estimate challenged by: R-

2009: Estimate of 42 percent assigned by working group. Beginning in 2008, to complement weak routine immunization services, Somalia offers DTP to children less than one year of age through semi-annual Child Health Days (CHDs). Coverage reported by the Government of Somalia includes immunizations delivered through routine services as well as through CHDs. Because reported coverage is based only on documented immunizations some DTP1 doses may be second or third doses. While Somalia reports routine doses of DTP disaggregated by routine services and CHDs, no data were provided for the number of DTP1 doses delivered through routine services. The WHO and UNICEF estimate is based on the observed dropout between DTP1 and DTP3 in 2010 where data from both DTP1 and DTP3 were available. There is, however, considerable uncertainty of at least plus or minus 10 percentage points regarding coverage estimates due to uncertainty in the number of children in the target population, the most recent Somali census was conducted in 1987, and the difficulty of coordinating recording and reporting between

CHD activities and routine services. It is important to note that immunizations provided through CHDs provide significant levels of protection against vaccine preventable diseases and are an important strategy in reaching children in this still fragile state. Estimate challenged by: R-

Somalia - Pol3

SOM - Pol3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	41	49	49	47	47	47	47	47	47	47	47	47
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	41	49	49	47	24	66	NA	62	64	69	77	73
Administrative	41	49	49	47	24	50	42	62	64	69	77	73
Survey	NA	*	NA	NA	NA	NA	NA	NA	26	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: 2020 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:

- 2020: Estimate based on extrapolation from data reported by national government. Reported data excluded. Incomplete reporting noted by the country. WHO and UNICEF encourage periodic independent coverage assessment in addition to improving the coverage of immunization services. Programme reports a two month vaccine stock-out at national and subnational levels. Estimate challenged by: D-
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- 2018: Estimate based on extrapolation from data reported by national government. Reported data excluded. See comment in 2019. Estimate challenged by: D-
- 2017: Estimate based on extrapolation from data reported by national government. The Somali Health and Demographic Survey 2020 results ignored by working group. Lower vaccination coverage levels suggested by the survey for the 2017 cohort are consistent with challenges in funding around delivery of the country's Essential Package of Health Services through the Somali Joint Health and Nutrition Program (JHNP), a multi-donor fund managed by UNICEF that aimed to strengthen the health system and service delivery across Somalia. The JHNP ended in December 2016. Survey results are based mostly on respondent recall of vaccination history given only four percent with available documented evidence in a home-based record. In contrast to prior surveys noted here, the 2017 survey incorporated three strata within the sampling process targeting urban, rural and nomadic communities. Exceptionally low vaccination coverage estimates among children residing in nomadic communities is observed and thus lowers the national coverage levels. Reported data excluded. See comment in 2019. Survey coverage for polio vaccine is unusual given polio campaigns reported to have taken place in the country around this time. Estimate challenged by: D-
- 2016: Estimate based on extrapolation from data reported by national government. Reported data excluded. See comment in 2019. Programme reports district level stock outs. GoC=Assigned by working group. Consistency with other antigens.
- 2015: Estimate based on extrapolation from data reported by national government. Reported data excluded. Unexplained increase in target population compared to 2014. Reported data excluded due to decline in reported coverage from 66 percent to 42 percent with increase to 62 percent. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in coverage is due in part to incomplete reporting. Reported data excluded due to an increase from 24 percent to 66 percent with decrease 42 percent. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2013: Estimate based on extrapolation from data reported by national government. Reported

data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone. Reported data excluded due to decline in reported coverage from 47 percent to 24 percent with increase to 66 percent. Estimate challenged by: D-

2012: Estimate based on coverage reported by national government. See comment from previous year. Estimate challenged by: D-

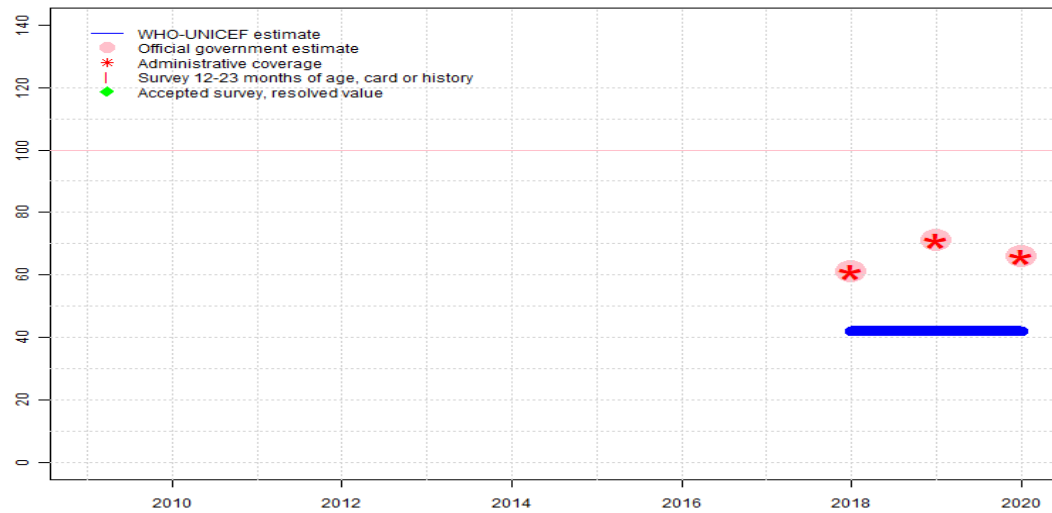
2011: Estimate based on coverage reported by national government. While OPV is offered during Child Health Days these doses are recorded as supplemental immunization doses. Estimate challenged by: D-

2010: Estimate is based on reported data. Northeast Zone, Somalia Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Somaliland Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Northeast Zone, Somalia Multiple Indicator Cluster Survey 2011 card or history results of 10 percent modified for recall bias to 7 percent based on 1st dose card or history coverage of 26 percent, 1st dose card only coverage of 7 percent and 3rd dose card only coverage of 2 percent. Somaliland Multiple Indicator Cluster Survey 2011 card or history results of 21 percent modified for recall bias to 20 percent based on 1st dose card or history coverage of 46 percent, 1st dose card only coverage of 14 percent and 3rd dose card only coverage of 6 percent. To complement the currently weak routine immunization system, Somalia also offers OPV for children under five years of age through semi-annual Child Health Days (CHDs). Reported data and estimate include only coverage reached through routine services and does not include immunizations delivered during CHDs. It is important to note that immunizations provided through CHDs provide significant levels of protection against vaccine preventable diseases and are an important strategy in reaching children in this still fragile state. Estimate challenged by: D-

2009: Estimate based on coverage reported by national government. To complement the currently weak routine immunization system, Somalia also offers OPV for children under five years of age through semi-annual Child Health Days (CHDs). Ministry of Health reports that 96 percent coverage was reached among children of this age group during CHDs. Reported data and estimate includes only coverage reached through routine services and does not include immunizations delivered during CHDs. It is important to note that immunizations provided through CHDs provide significant levels of protection against vaccine preventable diseases and are an important strategy in reaching children in this still fragile state. Estimate challenged by: D-

Somalia - IPV1

SOM - IPV1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	42	42	42
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	61	71	66
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	61	71	66
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: 2020 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:

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).

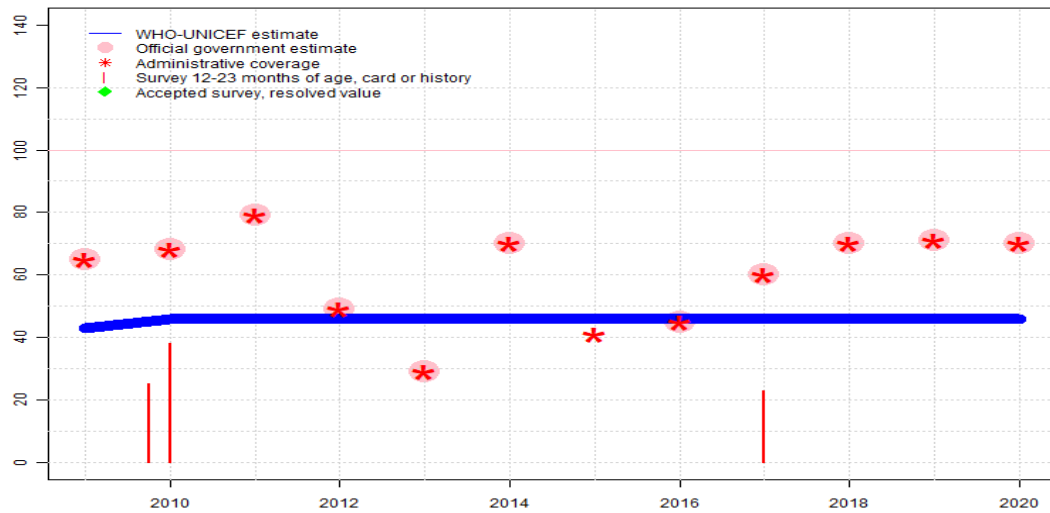
2020: Estimate based on DTP3 estimated coverage. Reported data excluded. Incomplete reporting noted by the country. WHO and UNICEF encourage periodic independent coverage assessment in addition to improving the coverage of immunization services. Programme reports a two month vaccine stock-out at national and subnational levels. Estimate challenged by: D-R-

2019: Estimate is based on estimated DTP3. Reported data excluded. WHO and UNICEF are aware of discussions related to organizing a working group to further assess and guide immunization system performance data improvement activities focused on improved recording and monitoring of immunization service delivery. Estimate challenged by: D-R-

2018: Inactivated polio vaccine introduced in November 2015. Reporting started in 2018. Estimate is based on estimated DTP3 coverage. Reported data excluded. See comment in 2019. Estimate challenged by: D-R-

Somalia - MCV1

SOM - MCV1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	43	46	46	46	46	46	46	46	46	46	46	46
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	65	68	79	49	29	70	NA	45	60	70	71	70
Administrative	65	68	79	49	29	70	41	45	60	70	71	70
Survey	NA	*	NA	NA	NA	NA	NA	NA	23	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: 2020 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:

- 2020: Reported data calibrated to 2010 levels. Reported data excluded. Incomplete reporting noted by the country. WHO and UNICEF encourage periodic independent coverage assessment in addition to improving the coverage of immunization services. Estimate challenged by: D-R-
- 2019: Reported data calibrated to 2010 levels. Reported data excluded. WHO and UNICEF are aware of discussions related to organizing a working group to further assess and guide immunization system performance data improvement activities focused on improved recording and monitoring of immunization service delivery. Estimate challenged by: D-R-
- 2018: Reported data calibrated to 2010 levels. Reported data excluded. See comment in 2019. Estimate challenged by: D-R-
- 2017: Reported data calibrated to 2010 levels. The Somali Health and Demographic Survey 2020 results ignored by working group. Lower vaccination coverage levels suggested by the survey for the 2017 cohort are consistent with challenges in funding around delivery of the country's Essential Package of Health Services through the Somali Joint Health and Nutrition Program (JHNP), a multi-donor fund managed by UNICEF that aimed to strengthen the health system and service delivery across Somalia. The JHNP ended in December 2016. Survey results are based mostly on respondent recall of vaccination history given only four percent with available documented evidence in a home-based record. In contrast to prior surveys noted here, the 2017 survey incorporated three strata within the sampling process targeting urban, rural and nomadic communities. Exceptionally low vaccination coverage estimates among children residing in nomadic communities is observed and thus lowers the national coverage levels. Reported data excluded. See comment in 2019. Estimate challenged by: R-
- 2016: Reported data calibrated to 2010 levels. Reported data excluded. See comment in 2019. Estimate challenged by: R-
- 2015: Reported data calibrated to 2010 levels. Reported data excluded. Unexplained increase in target population compared to 2014. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2014: Reported data calibrated to 2010 levels. Reported data excluded. Decline in coverage is due in part to incomplete reporting. Reported data excluded due to an increase from 29 percent to 70 percent with decrease 41 percent. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2013: Reported data calibrated to 2010 levels. Reported data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone. Reported data excluded due to decline in reported coverage from 49 percent to 29 percent with increase to 70 percent. Estimate challenged by: D-R-
- 2012: Reported data calibrated to 2010 levels. Reported data excluded. Decline in coverage reflects incomplete reporting from Central-South zone. See comment from previous year. Estimate challenged by: D-R-
- 2011: Reported data calibrated to 2010 levels. Reported data excluded due to an increase from 68 percent to 79 percent with decrease 49 percent. Routine immunization is delivered

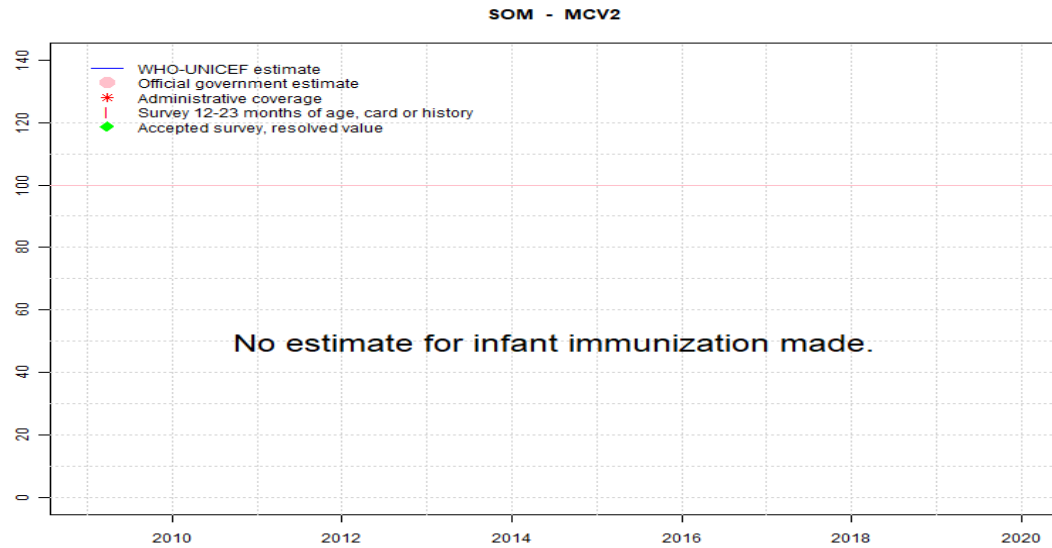
Somalia - MCV1

through fixed sites complemented by Child Health Days (CHD). This strategy of supplementing the routine immunization has been in place for the last 4 years; and has contributed to the improvement of immunization coverage. Estimate challenged by: R-

2010: Estimate of 46 percent assigned by working group. The WHO and UNICEF estimate follows the trend in the WHO and UNICEF estimates for DTP3 from 2008 through 2010, calibrated to the level of the 2008 reported measles coverage. There is, however, considerable uncertainty of at least plus or minus 10 percentage points regarding coverage estimates due to uncertainty in the number of children in the target population, the most recent Somali census was conducted in 1987, the difficulty of coordinating recording and reporting between CHD activities and routine services, and the assumption of trends similar to that of DTP3 coverage. It is important to note that immunizations provided through CHDs provide significant levels of protection against vaccine preventable diseases and are an important strategy in reaching children in this still fragile state. Northeast Zone, Somalia Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Somaliland Multiple Indicator Cluster Survey 2011 results ignored by working group. Survey results reflect coverage from Somaliland and Puntland (subnational). Estimate challenged by: R-

2009: Estimate of 43 percent assigned by working group. The WHO and UNICEF estimate follows the trend in the WHO and UNICEF estimates for DTP3 from 2008 through 2010, calibrated to the level of the 2008 reported measles coverage. There is, however, considerable uncertainty of at least plus or minus 10 percentage points regarding coverage estimates due to uncertainty in the number of children in the target population, the most recent Somali census was conducted in 1987, the difficulty of coordinating recording and reporting between CHD activities and routine services, and the assumption of trends similar to that of DTP3 coverage. It is important to note that immunizations provided through CHDs provide significant levels of protection against vaccine preventable diseases and are an important strategy in reaching children in this still fragile state. Estimate challenged by: R-

Somalia - MCV2



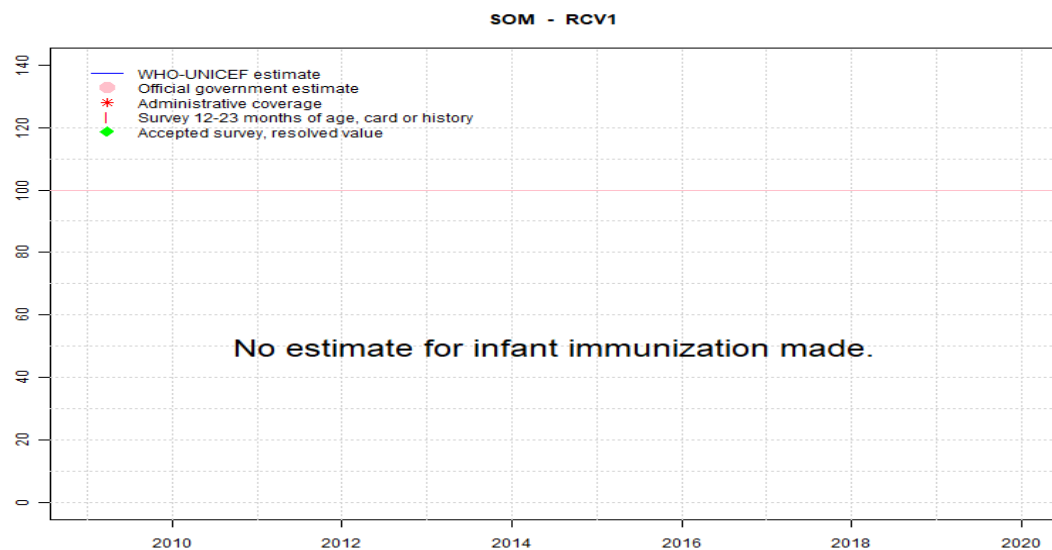
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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: 2020 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.

Somalia - RCV1



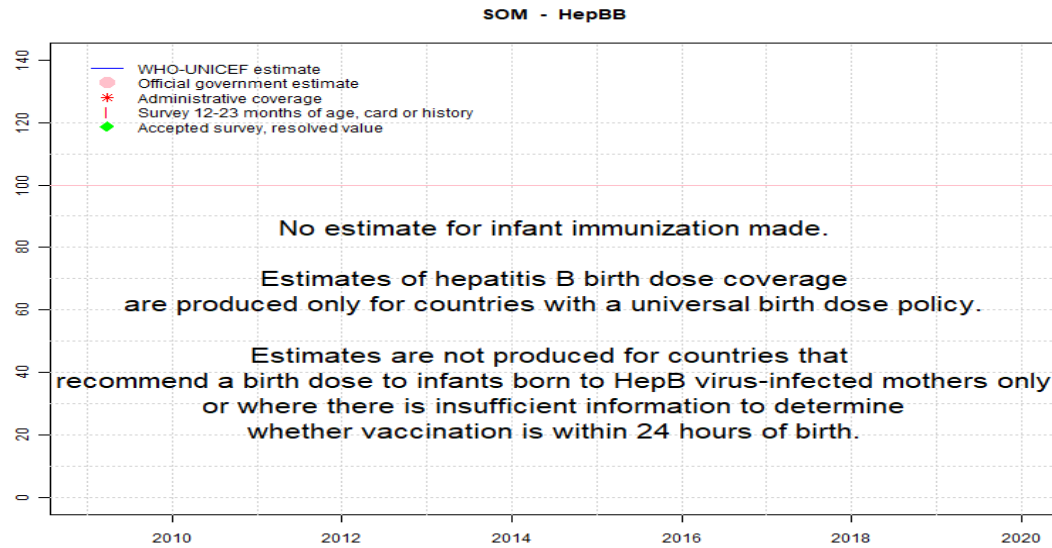
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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: 2020 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.

Somalia - HepBB



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

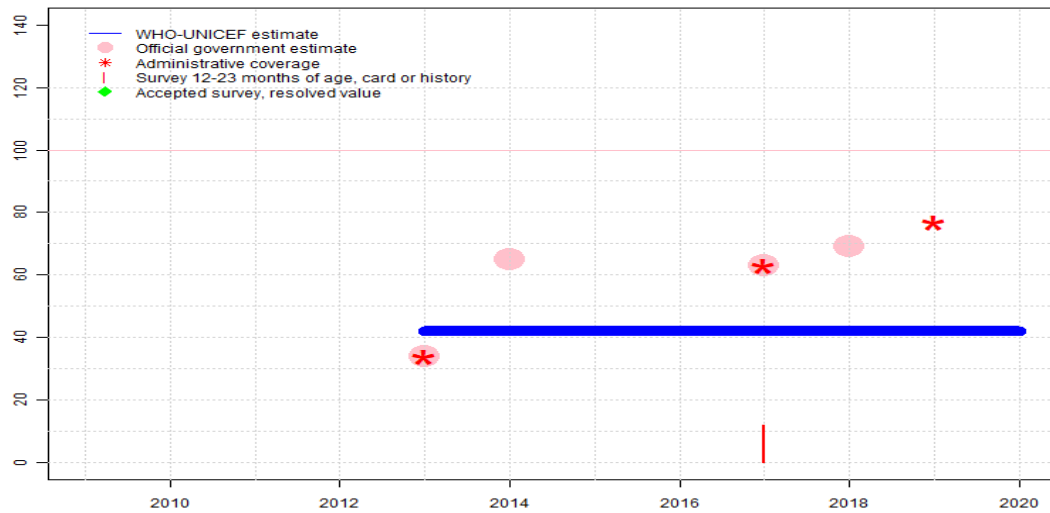
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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: 2020 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.

Somalia - HepB3

SOM - HepB3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	42	42	42	42	42	42	42	42
Estimate GoC	NA	NA	NA	NA	•	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	34	65	NA	NA	63	69	NA	NA
Administrative	NA	NA	NA	NA	34	NA	NA	NA	63	NA	77	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	12	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: 2020 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.

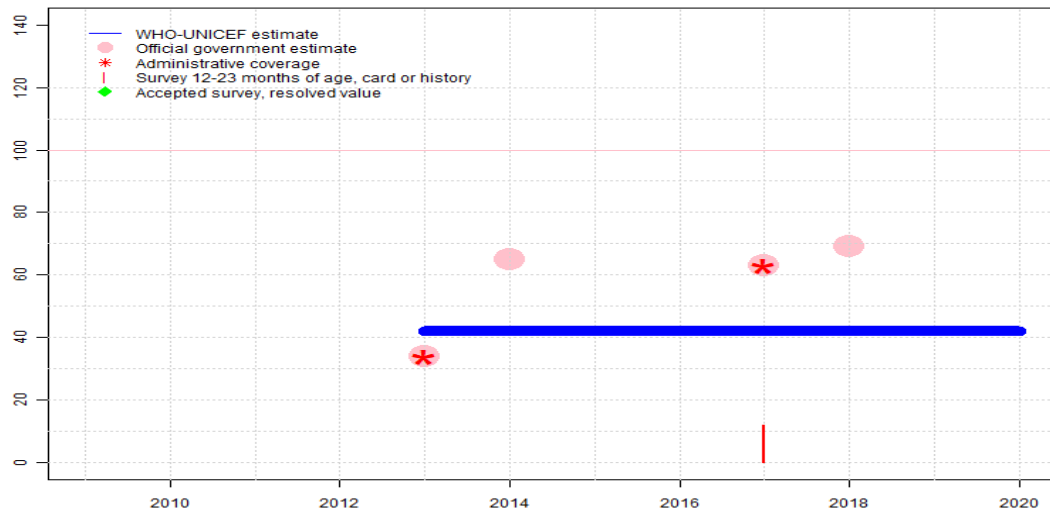
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2020: Estimate based on DTP3 estimated coverage. Programme reports a two month vaccine stock-out at national and subnational levels. GoC=No accepted empirical data
- 2019: Estimate based on estimated DTP3 coverage. Reported data excluded. WHO and UNICEF are aware of discussions related to organizing a working group to further assess and guide immunization system performance data improvement activities focused on improved recording and monitoring of immunization service delivery. Estimate challenged by: D-R-
- 2018: Estimate based on estimated DTP3 coverage. Reported data excluded. See comment in 2019. Estimate challenged by: R-
- 2017: Estimate based on estimated DTP3 coverage. The Somali Health and Demographic Survey 2020 results ignored by working group. Lower vaccination coverage levels suggested by the survey for the 2017 cohort are consistent with challenges in funding around delivery of the country's Essential Package of Health Services through the Somali Joint Health and Nutrition Program (JHNP), a multi-donor fund managed by UNICEF that aimed to strengthen the health system and service delivery across Somalia. The JHNP ended in December 2016. Survey results are based mostly on respondent recall of vaccination history given only four percent with available documented evidence in a home-based record. In contrast to prior surveys noted here, the 2017 survey incorporated three strata within the sampling process targeting urban, rural and nomadic communities. Exceptionally low vaccination coverage estimates among children residing in nomadic communities is observed and thus lowers the national coverage levels. Reported data excluded. See comment in 2019. Estimate challenged by: D-R-
- 2016: Estimate based on estimated DTP3 coverage. GoC=No accepted empirical data
- 2015: Estimate based on estimated DTP3 coverage. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2014: Estimate based on estimated DTP3 coverage. Reported data excluded. Decline in coverage is due in part to incomplete reporting. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2013: Estimate based on estimated DTP3 coverage. Reported data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone. DTP-HepB-Hib pentavalent vaccine introduced in April 2013. DTP3 estimate is higher reflecting use of existing trivalent DTP vaccine during January-March 2013. Estimate challenged by: D-R-

Somalia - Hib3

SOM - Hib3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	42	42	42	42	42	42	42	42
Estimate GoC	NA	NA	NA	NA	•	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	34	65	NA	NA	63	69	NA	NA
Administrative	NA	NA	NA	NA	34	NA	NA	NA	63	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	12	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.

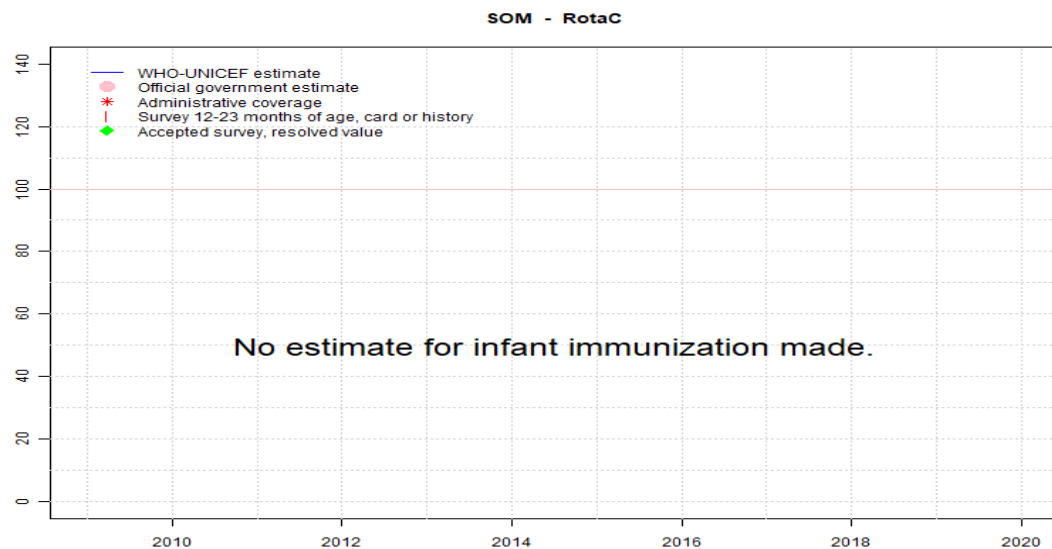
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2020 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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:

- 2020: Estimate based on DTP3 estimated coverage. Programme reports a two month vaccine stock-out at national and subnational levels. GoC=No accepted empirical data
- 2019: Estimate based on estimated DTP3 coverage. GoC=No accepted empirical data
- 2018: Estimate based on estimated DTP3 coverage. Reported data excluded. See comment in 2019. Estimate challenged by: R-
- 2017: Estimate based on estimated DTP3 coverage. The Somali Health and Demographic Survey 2020 results ignored by working group. Lower vaccination coverage levels suggested by the survey for the 2017 cohort are consistent with challenges in funding around delivery of the country's Essential Package of Health Services through the Somali Joint Health and Nutrition Program (JHNP), a multi-donor fund managed by UNICEF that aimed to strengthen the health system and service delivery across Somalia. The JHNP ended in December 2016. Survey results are based mostly on respondent recall of vaccination history given only four percent with available documented evidence in a home-based record. In contrast to prior surveys noted here, the 2017 survey incorporated three strata within the sampling process targeting urban, rural and nomadic communities. Exceptionally low vaccination coverage estimates among children residing in nomadic communities is observed and thus lowers the national coverage levels. Reported data excluded. See comment in 2019. Estimate challenged by: D-R-
- 2016: Estimate based on estimated DTP3 coverage. GoC=No accepted empirical data
- 2015: Estimate based on estimated DTP3 coverage. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2014: Estimate based on estimated DTP3 coverage. Reported data excluded. Decline in coverage is due in part to incomplete reporting. GoC=Assigned by working group. Unexplained increase in target population between 2014 and 2015.
- 2013: Estimate based on estimated DTP3 coverage. Reported data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone. DTP-HepB-Hib pentavalent vaccine introduced in April 2013. DTP3 estimate is higher reflecting use of existing trivalent DTP vaccine during January-March 2013. Estimate challenged by: D-R-

Somalia - RotaC



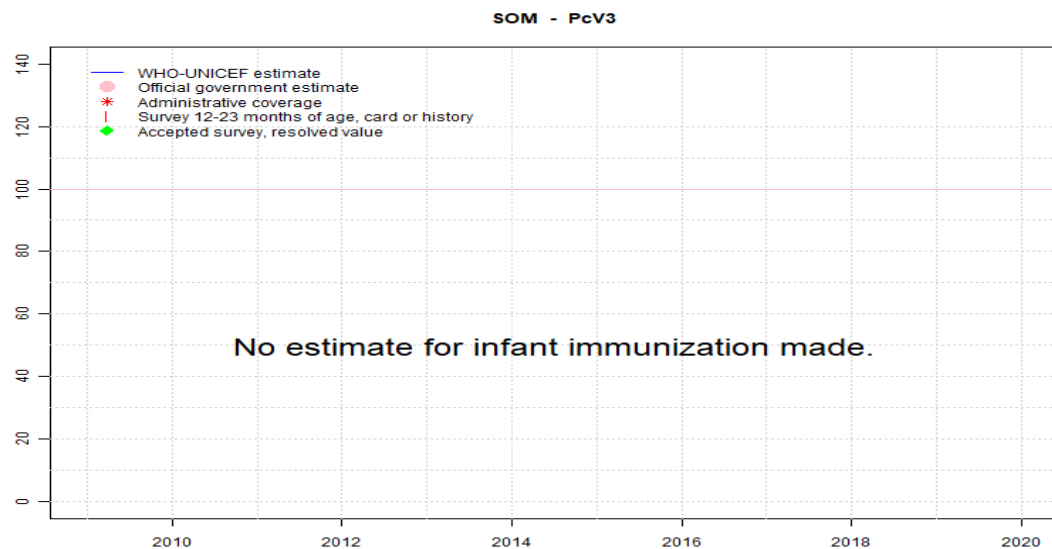
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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: 2020 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.

Somalia - PcV3



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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: 2020 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.

Somalia - survey details

2017 The Somali Health and Demographic Survey 2020

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	36.7	12-23 m	2240	4
DTP1	Card or History	21	12-23 m	2240	4
DTP3	Card or History	12	12-23 m	2240	4
HepB1	Card or History	21	12-23 m	2240	4
HepB3	Card or History	12	12-23 m	2240	4
Hib1	Card or History	21	12-23 m	2240	4
Hib3	Card or History	12	12-23 m	2240	4
MCV1	Card or History	22.7	12-23 m	2240	4
Pol1	Card or History	29.6	12-23 m	2240	4
Pol3	Card or History	26.2	12-23 m	2240	4

2010 Northeast Zone, Somalia Multiple Indicator Cluster Survey 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	16.6	12-23 m	792	13
BCG	Card	6.4	12-23 m	792	13
BCG	Card or History	23	12-23 m	792	13
BCG	History	16.6	12-23 m	792	13
DTP1	C or H <12 months	18.8	12-23 m	792	13
DTP1	Card	8.5	12-23 m	792	13
DTP1	Card or History	24.1	12-23 m	792	13
DTP1	History	15.6	12-23 m	792	13
DTP3	C or H <12 months	7.2	12-23 m	792	13
DTP3	Card	4.1	12-23 m	792	13
DTP3	Card or History	9.4	12-23 m	792	13
DTP3	History	5.3	12-23 m	792	13
MCV1	C or H <12 months	16.6	12-23 m	792	13
MCV1	Card	9.3	12-23 m	792	13
MCV1	Card or History	25.4	12-23 m	792	13
MCV1	History	16.2	12-23 m	792	13
Pol1	C or H <12 months	19.2	12-23 m	792	13
Pol1	Card	7	12-23 m	792	13
Pol1	Card or History	26.5	12-23 m	792	13
Pol1	History	19.5	12-23 m	792	13
Pol3	C or H <12 months	8.3	12-23 m	792	13

Pol3	Card	2.4	12-23 m	792	13
Pol3	Card or History	9.7	12-23 m	792	13
Pol3	History	7.2	12-23 m	792	13

2010 Somaliland Multiple Indicator Cluster Survey 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	26.8	12-23 m	771	20
BCG	Card	10	12-23 m	771	20
BCG	Card or History	36	12-23 m	771	20
BCG	History	26	12-23 m	771	20
DTP1	C or H <12 months	29.4	12-23 m	771	20
DTP1	Card	15	12-23 m	771	20
DTP1	Card or History	39.1	12-23 m	771	20
DTP1	History	24.1	12-23 m	771	20
DTP3	C or H <12 months	10.8	12-23 m	771	20
DTP3	Card	6.9	12-23 m	771	20
DTP3	Card or History	13.4	12-23 m	771	20
DTP3	History	6.6	12-23 m	771	20
MCV1	C or H <12 months	25.8	12-23 m	771	20
MCV1	Card	15	12-23 m	771	20
MCV1	Card or History	37.8	12-23 m	771	20
MCV1	History	22.8	12-23 m	771	20
Pol1	C or H <12 months	33	12-23 m	771	20
Pol1	Card	13.9	12-23 m	771	20
Pol1	Card or History	45.5	12-23 m	771	20
Pol1	History	31.6	12-23 m	771	20
Pol3	C or H <12 months	16.5	12-23 m	771	20
Pol3	Card	6.2	12-23 m	771	20
Pol3	Card or History	20.6	12-23 m	771	20
Pol3	History	14.4	12-23 m	771	20

2005 Somalia Multiple Indicator Cluster Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	25.7	12-23 m	1086	8
BCG	Card	8	12-23 m	1086	8

Somalia - survey details

BCG	Card or History	29.9	12-23 m	1086	8
BCG	History	21.9	12-23 m	1086	8
DTP1	C or H <12 months	20.4	12-23 m	1086	8
DTP1	Card	8.1	12-23 m	1086	8
DTP1	Card or History	24.4	12-23 m	1086	8
DTP1	History	16.3	12-23 m	1086	8
DTP3	C or H <12 months	12.2	12-23 m	1086	8
DTP3	Card	7.4	12-23 m	1086	8
DTP3	Card or History	14.2	12-23 m	1086	8
DTP3	History	6.7	12-23 m	1086	8
MCV1	C or H <12 months	18.9	12-23 m	1086	8
MCV1	Card	7.1	12-23 m	1086	8
MCV1	Card or History	29.4	12-23 m	1086	8
MCV1	History	22.3	12-23 m	1086	8
Pol1	C or H <12 months	51.5	12-23 m	1086	8
Pol1	Card	8	12-23 m	1086	8
Pol1	Card or History	61.9	12-23 m	1086	8
Pol1	History	53.9	12-23 m	1086	8
Pol3	C or H <12 months	34.8	12-23 m	1086	8
Pol3	Card	7.5	12-23 m	1086	8

Pol3	Card or History	38.6	12-23 m	1086	8
Pol3	History	31.1	12-23 m	1086	8

1999 MICS Somalia, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	70.8	12-23 m	490	-
BCG	Card or History	70.8	12-23 m	490	-
DTP1	Card	58.7	12-23 m	490	-
DTP1	Card or History	58.7	12-23 m	490	-
DTP3	Card	35.6	12-23 m	490	-
DTP3	Card or History	35.6	12-23 m	490	-
MCV1	Card	37.5	12-23 m	490	-
MCV1	Card or History	37.5	12-23 m	490	-
Pol1	Card	59.6	12-23 m	490	-
Pol1	Card or History	59.6	12-23 m	490	-
Pol3	Card	40	12-23 m	490	-
Pol3	Card or History	40	12-23 m	490	-

Further information and estimates for previous years are available at:

<http://www.data.unicef.org/child-health/immunization>

<https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/data-statistics-and-graphics>