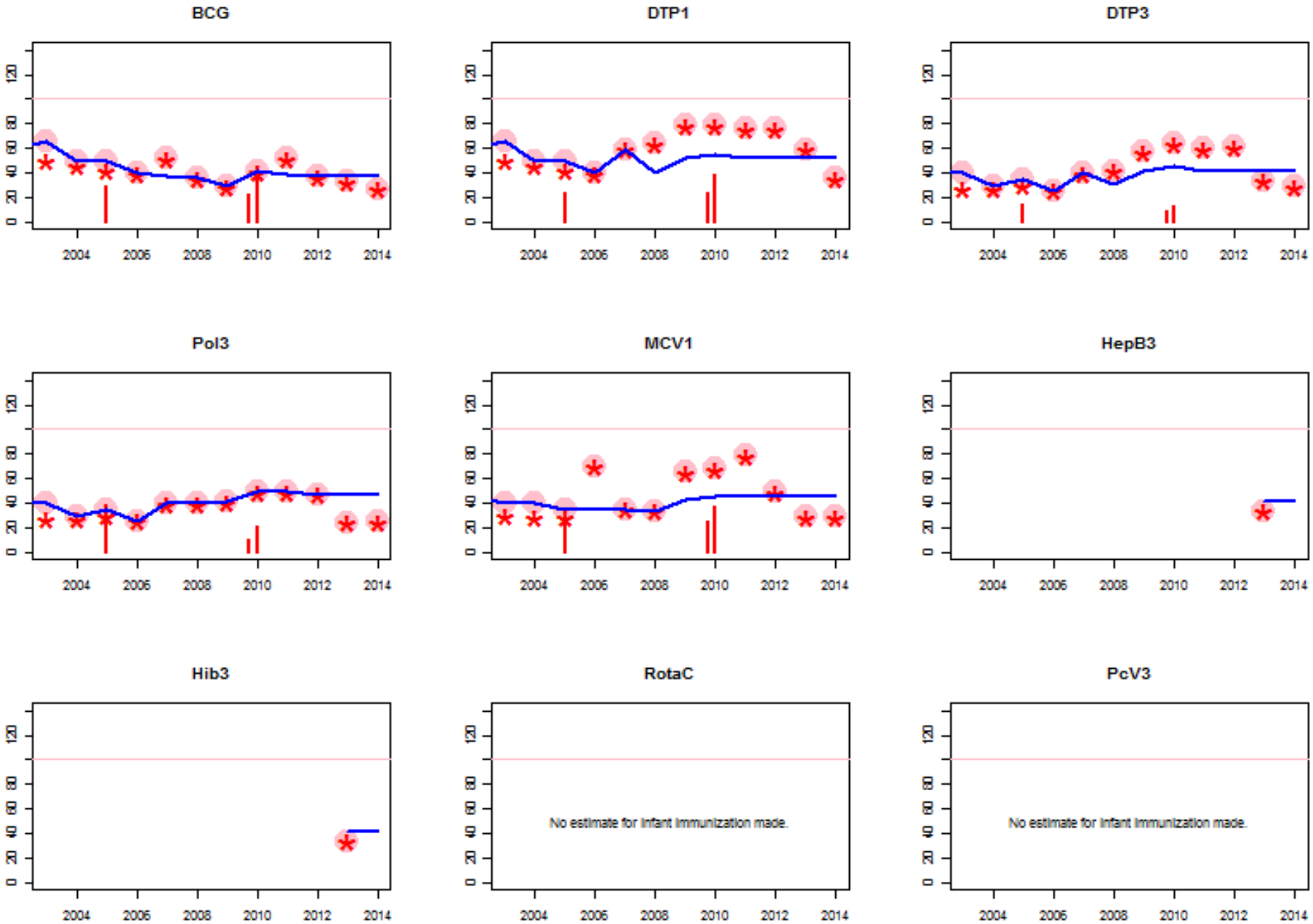
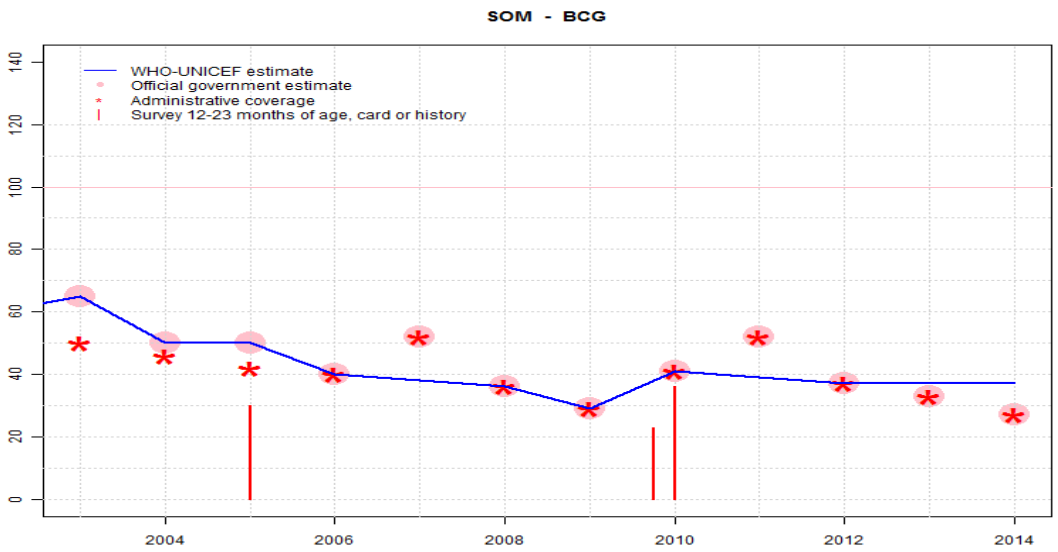

BCG
DTP1
DTP3
Pol3
MCV1
HepB3
Hib3
RotaC
PcV3
No estimate for infant immunization made.
No estimate for infant immunization made.
0
20
40
60
80
120
2004
2006
2008
2010
2012
2014

Somalia - BCG



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	65	50	50	40	38	36	29	41	39	37	37	37
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	65	50	50	40	52	36	29	41	52	37	33	27
Administrative	50	46	42	40	52	36	29	41	52	37	33	27
Survey	NA	NA	30	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: 2012 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:

2003: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2004: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2005: Estimate based on coverage reported by national government. Somalia Multiple Indicator Cluster Survey 2006 results ignored by working group. Ninety-two percent of survey results were based on maternal recall. Estimate challenged by: D-S-

2006: Estimate based on coverage reported by national government. Estimate challenged by: S-

2007: Estimate based on interpolation between data reported by national government. Reported data excluded. Unexplained increase from 40 percent to 52 percent with decrease 36 percent. Estimate challenged by: S-

2008: Estimate based on coverage reported by national government. Two months of vaccine stock-out was reported for January through February 2008. Estimate challenged by: S-

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: S-

2010: Estimate based on coverage reported by national government. 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: S-

2011: Estimate based on interpolation between data reported by national government. Reported data excluded. Unexplained increase from 41 percent to 52 percent with decrease 37 percent. Estimate challenged by: S-

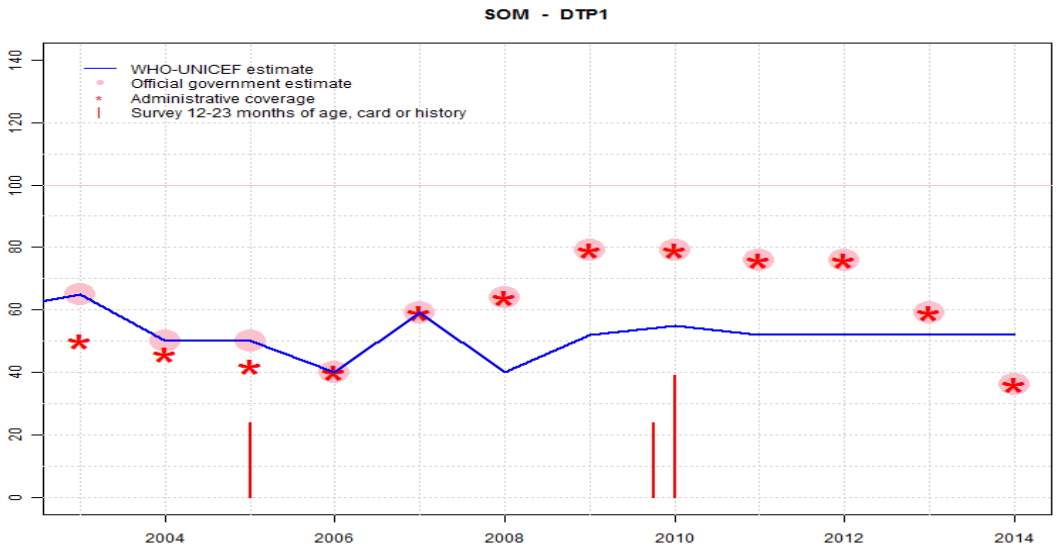
2012: Estimate based on coverage reported by national government. Decline in coverage is likely attributable to vaccine shortage. Estimate challenged by: S-

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 of 37 percent changed from previous revision value of 33 percent. GoC=Assigned by working group. Consistency with other antigens.

2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in coverage is due in part to incomplete reporting. 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 2 month stock-out at national level. Estimate challenged by: D-

Somalia - DTP1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	65	50	50	40	59	40	52	55	52	52	52	52
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	65	50	50	40	59	64	79	79	76	76	59	36
Administrative	50	46	42	40	59	64	79	79	76	76	59	36
Survey	NA	NA	24	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: 2012 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:

2003: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2004: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2005: Estimate based on coverage reported by national government. Somalia Multiple Indicator Cluster Survey 2006 results ignored by working group. Ninety-two percent of survey results were based on maternal recall. Estimate challenged by: D-S-

2006: Estimate based on coverage reported by national government. Estimate challenged by: S-

2007: The increase in coverage is partially attributable to a revision in the size of the target population. Estimate challenged by: D-S-

2008: WHO and UNICEF estimate based on data reported in 2009 Joint Reporting Form. Decline may be the result of two months reported vaccine stock-out in January through February 2008 and the inclusion of immunizations delivered through the December 2008 Child Helath Days. Estimate challenged by: R-S-

2009: 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-S-

2009: 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-S-

2010: 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-S-

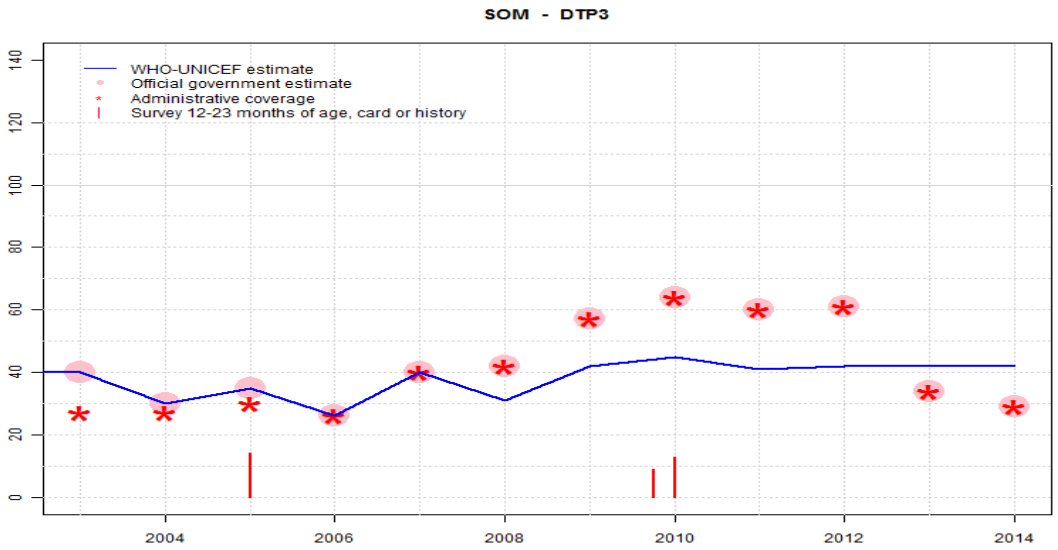
2011: Reported data calibrated to 2010 levels. Routine immunization is delivered through fixed sites complemented by Child Health Days (CHD). This strategy of supplementing the routine immunization has been in place for the last 4 years; and has contributed to the improvement of immunization coverage.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

2012: Reported data calibrated to 2010 levels. See comment from previous year. Estimate challenged by: S-

2013: Reported data calibrated to 2010 levels. Reported data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone.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. GoC=Assigned by working group. Consistency with other antigens.

2014: Reported data calibrated to 2010 levels. Reported data excluded. Decline in coverage is due in part to incomplete reporting.Reported data excluded. Change in reported coverage from 59 level to 36 percent. 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. Estimate challenged by: D-

Somalia - DTP3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	40	30	35	26	40	31	42	45	41	42	42	42
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	40	30	35	26	40	42	57	64	60	61	34	29
Administrative	27	27	30	26	40	42	57	64	60	61	34	29
Survey	NA	NA	14	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: 2012 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:

2003: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2004: Estimate based on coverage reported by national government. Estimate challenged by: S-

2005: Estimate based on coverage reported by national government. Somalia Multiple Indicator Cluster Survey 2006 results ignored by working group. Ninety-two percent of survey results were based on maternal recall.Somalia Multiple Indicator Cluster Survey 2006 card or history results of 14 percent modifed for recall bias to 21 percent based on 1st dose card or history coverage of 24 percent, 1st dose card only coverage of 8 percent and 3d dose card only coverage of 7 percent. Estimate challenged by: D-S-

2006: Estimate based on coverage reported by national government. Estimate challenged by: S-

2007: Estimate based on reported data. Estimate challenged by: D-S-

2008: WHO and UNICEF estimate based on data reported in 2009 Joint Reporting Form. Decline may be the result of two months reported vaccine stock-out in January through February 2008 and the inclusion of immunizations delivered through the December 2008 Child Health Days. Estimate challenged by: R-S-

2009: 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-S-

2010: 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 So-

malia 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 modifed 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 3d dose card only coverage of 4 percent. Somaliland Multiple Indicator Cluster Survey 2011 card or history results of 13 percent modifed 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 3d dose card only coverage of 7 percent. Estimate challenged by: R-S-

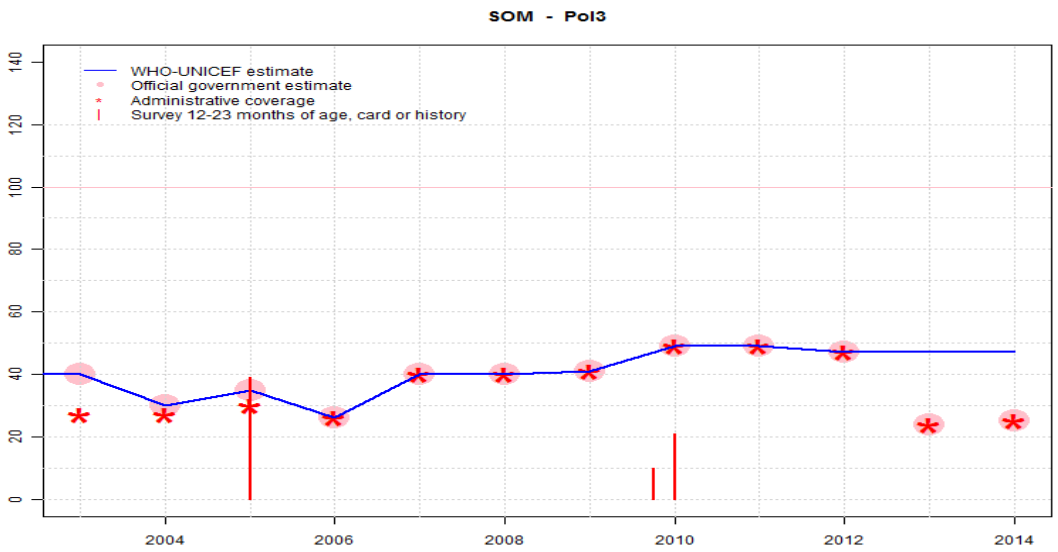
2011: Reported data calibrated to 2010 levels. Routine immunization is delivered through fixed sites complemented by Child Health Days (CHD). This strategy of supplementing the routine immunization has been in place for the last 4 years; and has contributed to the improvement of immunization coverage.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

2012: Reported data calibrated to 2010 levels. See comment from previous year. Estimate challenged by: S-

2013: Reported data calibrated to 2010 levels. Reported data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone. 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-

2014: Reported data calibrated to 2010 levels. Reported data excluded. Decline in coverage is due in part to incomplete reporting. 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. Estimate challenged by: D-

Somalia - Pol3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	40	30	35	26	40	40	41	49	49	47	47	47
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	40	30	35	26	40	40	41	49	49	47	24	25
Administrative	27	27	30	26	40	40	41	49	49	47	24	25
Survey	NA	NA	39	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: 2012 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:

2003: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2004: Estimate based on coverage reported by national government. Estimate challenged by: S-

2005: Estimate based on coverage reported by national government. Somalia Multiple Indicator Cluster Survey 2006 results ignored by working group. Ninety-two percent of survey results were based on maternal recall.Somalia Multiple Indicator Cluster Survey 2006 card or history results of 39 percent modifed for recall bias to 62 percent based on 1st dose card or history coverage of 62 percent, 1st dose card only coverage of 8 percent and 3d dose card only coverage of 8 percent. Estimate challenged by: D-S-

2006: Estimate based on coverage reported by national government. Estimate challenged by: S-

2007: Estimate based on coverage reported by national government. Government of Somalia reports four months of vaccine stockout in 2007. Estimate challenged by: D-S-

2008: Estimate based on coverage reported by national government. Estimate challenged by: S-

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: S-

2010: Estimate based on coverage reported by national government. 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 modifed 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 3d dose card only coverage of 2 percent. Somaliland Multiple Indicator Cluster Survey 2011 card or history results of 21 percent modifed 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 3d 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-S-

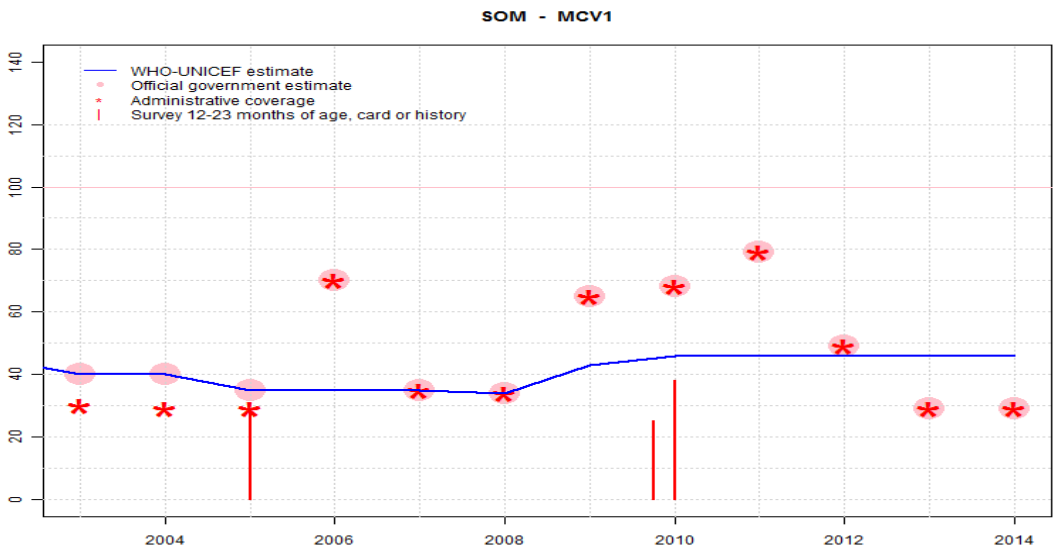
2011: Estimate based on coverage reported by national government. While OPV is offered during Child Health Days these doses are recorded as supplemental immunization doses. Estimate challenged by: D-S-

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

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-

2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in coverage is due in part to incomplete reporting. 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. Estimate challenged by: D-

Somalia - MCV1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	40	40	35	35	35	34	43	46	46	46	46	46
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	40	40	35	70	35	34	65	68	79	49	29	29
Administrative	30	29	29	70	35	34	65	68	79	49	29	29
Survey	NA	NA	29	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: 2012 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:

2003: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2004: Estimate based on coverage reported by national government. Estimate challenged by: D-S-

2005: Estimate based on coverage reported by national government. Somalia Multiple Indicator Cluster Survey 2006 results ignored by working group. Ninety-two percent of survey results were based on maternal recall. Estimate challenged by: D-S-

2006: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Unexplained increase from 35 percent to 70 percent with decrease 35 percent. Reported MCV coverage includes doses administered during a measles campaign. Estimate challenged by: D-S-

2007: Estimate based on coverage reported by national government. Estimate challenged by: S-

2008: Estimate based on reported data. Estimate challenged by: S-

2009: 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 coverge. 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-S-

2010: 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 coverge. 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-S-

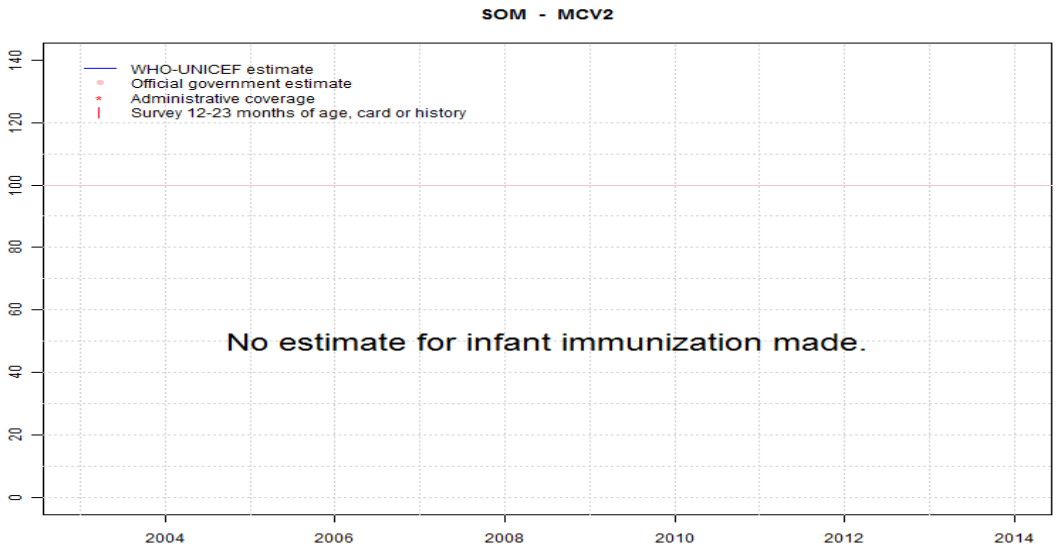
2011: Reported data calibrated to 2010 levels. Reported data excluded. Unexplained increase from 68 percent to 79 percent with decrease 49 percent. Routine immunization is delivered through fixed sites complemented by Child Health Days (CHD). This strategy of supplementing the routine immunization has been in place for the last 4 years; and has contributed to the improvement of immunization coverage. Estimate challenged by: D-S-

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: S-

2013: Reported data calibrated to 2010 levels. Reported data excluded. Decline in reported coverage reflects incomplete reporting from the Central-South zone. Estimate challenged by: D-

2014: Reported data calibrated to 2010 levels. Reported data excluded. Decline in coverage is due in part to incomplete reporting. 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. Estimate challenged by: D-

Somalia - MCV2



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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.

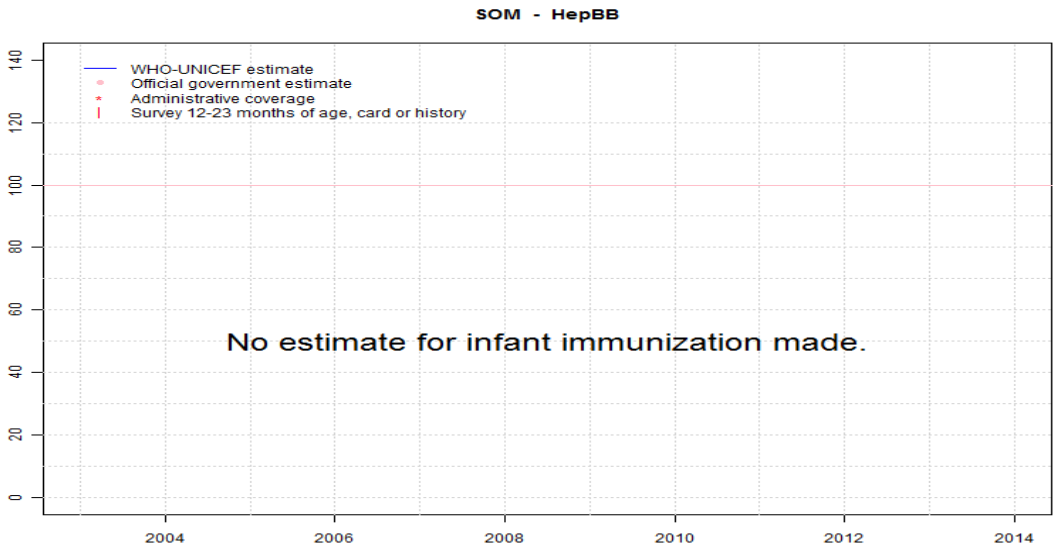
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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: 2012 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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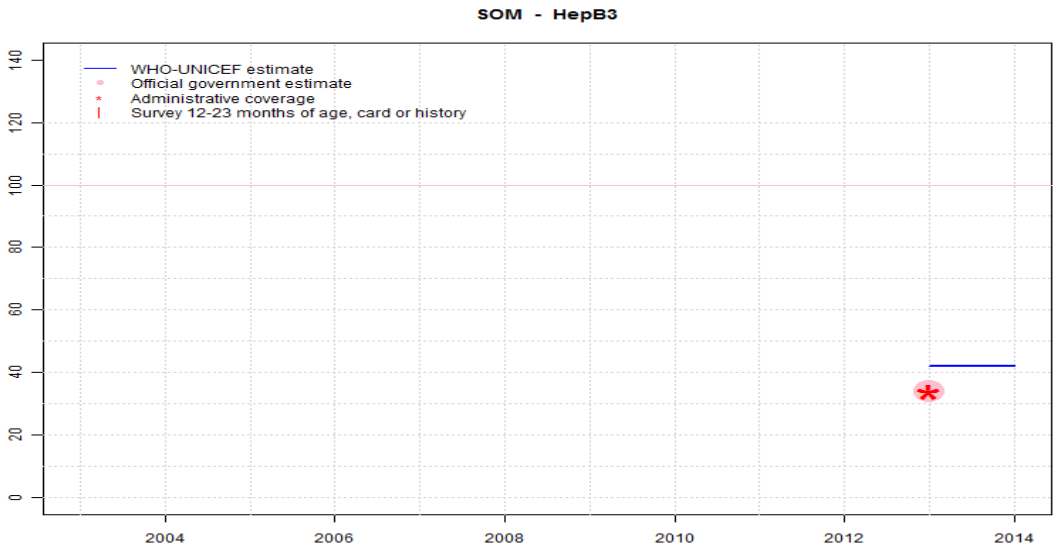
Somalia - HepB3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	42	42
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34	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: 2012 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.

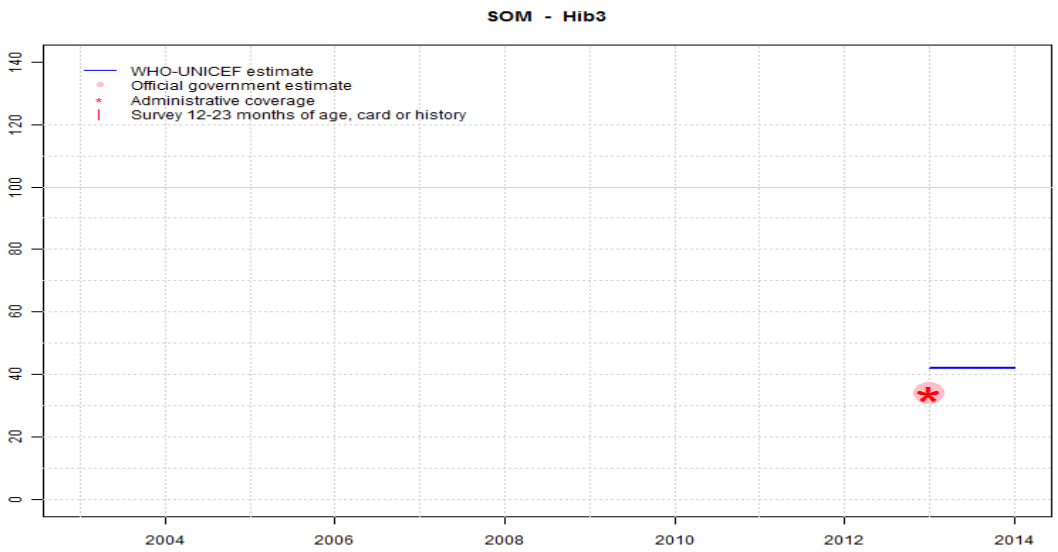
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2013: Coverage level follows that for third dose of DTP containing vaccine. 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 of 42 percent changed from previous revision value of 34 percent. Estimate challenged by: D-R-

2014: Coverage level follows that for third dose of DTP containing vaccine. 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. GoC=No accepted empirical data

Somalia - Hib3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	42	42
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34	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: 2012 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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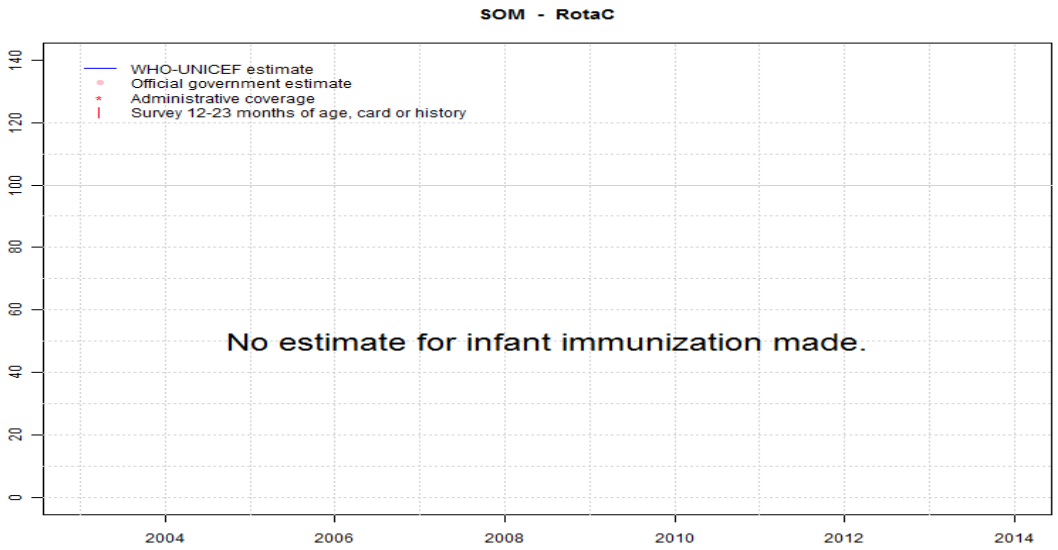
Description:

2013: Coverage level follows that for DTP containing vaccine. 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 of 42 percent changed from previous revision value of 34 percent. Estimate challenged by: D-R-

2014: Coverage level follows that for DTP containing vaccine. 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. GoC=No accepted empirical data

Somalia - RotaC



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

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

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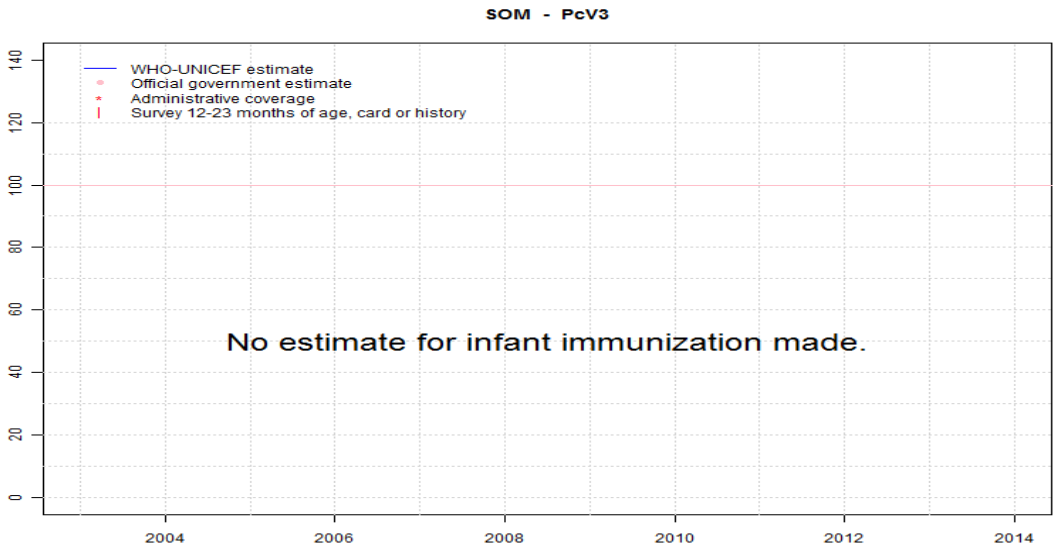
Somalia - PcV3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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: 2012 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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Somalia - survey details

2010 Northeast Zone, Somalia Multiple Indicator Cluster Survey 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	17	12-23 m	792	13
BCG	Card	6	12-23 m	792	13
BCG	Card or History	23	12-23 m	792	13
BCG	History	17	12-23 m	792	13
DTP1	C or H <12 months	19	12-23 m	792	13
DTP1	Card	8	12-23 m	792	13
DTP1	Card or History	24	12-23 m	792	13
DTP1	History	16	12-23 m	792	13
DTP3	C or H <12 months	7	12-23 m	792	13
DTP3	Card	4	12-23 m	792	13
DTP3	Card or History	9	12-23 m	792	13
DTP3	History	5	12-23 m	792	13
MCV1	C or H <12 months	17	12-23 m	792	13
MCV1	Card	9	12-23 m	792	13
MCV1	Card or History	25	12-23 m	792	13
MCV1	History	16	12-23 m	792	13
Pol1	C or H <12 months	19	12-23 m	792	13
Pol1	Card	7	12-23 m	792	13
Pol1	Card or History	26	12-23 m	792	13
Pol1	History	20	12-23 m	792	13
Pol3	C or H <12 months	8	12-23 m	792	13
Pol3	Card	2	12-23 m	792	13
Pol3	Card or History	10	12-23 m	792	13
Pol3	History	7	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	27	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	12-23 m	771	20
DTP1	Card	15	12-23 m	771	20
DTP1	Card or History	39	12-23 m	771	20
DTP1	History	24	12-23 m	771	20
DTP3	C or H <12 months	11	12-23 m	771	20
DTP3	Card	7	12-23 m	771	20
DTP3	Card or History	13	12-23 m	771	20
DTP3	History	7	12-23 m	771	20
MCV1	C or H <12 months	26	12-23 m	771	20
MCV1	Card	15	12-23 m	771	20
MCV1	Card or History	38	12-23 m	771	20
MCV1	History	23	12-23 m	771	20
Pol1	C or H <12 months	33	12-23 m	771	20
Pol1	Card	14	12-23 m	771	20
Pol1	Card or History	46	12-23 m	771	20
Pol1	History	32	12-23 m	771	20
Pol3	C or H <12 months	16	12-23 m	771	20
Pol3	Card	6	12-23 m	771	20
Pol3	Card or History	21	12-23 m	771	20
Pol3	History	14	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	26	12-23 m	1086	8
BCG	Card	8	12-23 m	1086	8
BCG	Card or History	30	12-23 m	1086	8
BCG	History	22	12-23 m	1086	8
DTP1	C or H <12 months	20	12-23 m	1086	8
DTP1	Card	8	12-23 m	1086	8
DTP1	Card or History	24	12-23 m	1086	8
DTP1	History	16	12-23 m	1086	8
DTP3	C or H <12 months	12	12-23 m	1086	8
DTP3	Card	7	12-23 m	1086	8
DTP3	Card or History	14	12-23 m	1086	8
DTP3	History	7	12-23 m	1086	8
MCV1	C or H <12 months	19	12-23 m	1086	8
MCV1	Card	7	12-23 m	1086	8
MCV1	Card or History	29	12-23 m	1086	8
MCV1	History	22	12-23 m	1086	8
Pol1	C or H <12 months	52	12-23 m	1086	8

Pol1	Card	8	12-23 m	1086	8
Pol1	Card or History	62	12-23 m	1086	8
Pol1	History	54	12-23 m	1086	8
Pol3	C or H <12 months	35	12-23 m	1086	8
Pol3	Card	8	12-23 m	1086	8
Pol3	Card or History	39	12-23 m	1086	8
Pol3	History	31	12-23 m	1086	8

1999 MICS Somalia, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	71	12-23 m	490	-
BCG	Card or History	71	12-23 m	490	-
DTP1	Card	59	12-23 m	490	-
DTP1	Card or History	59	12-23 m	490	-
DTP3	Card	36	12-23 m	490	-
DTP3	Card or History	36	12-23 m	490	-
MCV1	Card	38	12-23 m	490	-
MCV1	Card or History	38	12-23 m	490	-
Pol1	Card	60	12-23 m	490	-
Pol1	Card or History	60	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
http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html

Somalia

WHO/UNICEF Estimates of Protection at Birth (PAB) against tetanus

In countries where tetanus is recommended for girls and women coverage is usually reported as "TT2+", i.e. the proportion of (pregnant) women who have received their second or superior TT dose in a given year. TT2 + coverage, however, can under-represent the actual proportion of births that are protected against tetanus as it does not include women who have previously received protective doses, women who received one dose without documentation of previous doses, and women who received doses in TT (or Td) supplemental immunization activities (SIA). In addition, girls who have received DTP in their childhood and are entering childbearing age, may be protected with TT booster doses.

WHO and UNICEF have developed a model that takes into account the above scenarios, and calculates the proportion of births in a given year that can be considered as having been protected against tetanus - "Protection at Birth".

In this model, annual cohorts of women are followed from infancy through their life. A proportion receives DTP in infancy (estimated based on the WHO-UNICEF estimates of DTP3 coverage). In addition some of these women also receive TT through routine services when they are pregnant and may also receive TT during SIAs. The model also adjusts reported data, taking into account coverage patterns in other years, and/or results available through surveys. The duration of protection is then calculated, based on WHO estimates of the duration of protection by doses ever received. The proportion of births that are protected against tetanus as a result of maternal immunization reflects the tetanus immunization received by the mother throughout her life rather than simply the TT immunizations received during the current pregnancy.

The model was used in the mid to late 2000. Currently, the coverage series developed by the model is used as the baseline, and efforts are made to obtain data from all sources that include the JRF and reported trend over the years, routine PAB reporting and its trend over the years, data from surveys (DHS, MICS, EPI), whether countries have been validated for the attainment of maternal and neonatal tetanus elimination and what the TT coverage figures are from the survey etc and all the information is used to arrive at an estimate of the protection-at-birth from TT vaccination.

Year	PAB coverage estimate (%)
2003	45
2004	45
2005	47
2006	51
2007	50
2008	49
2009	64
2010	64
2011	64
2012	64
2013	64
2014	64

[1] This model is described in: Griffiths U., Wolfson L., Quddus A., Younus M., Hafiz R.. Incremental cost-effectiveness of supplementary immunization activities to prevent neo-natal tetanus in Pakistan. Bulletin of the World Health Organization 2004; 82:643-651.