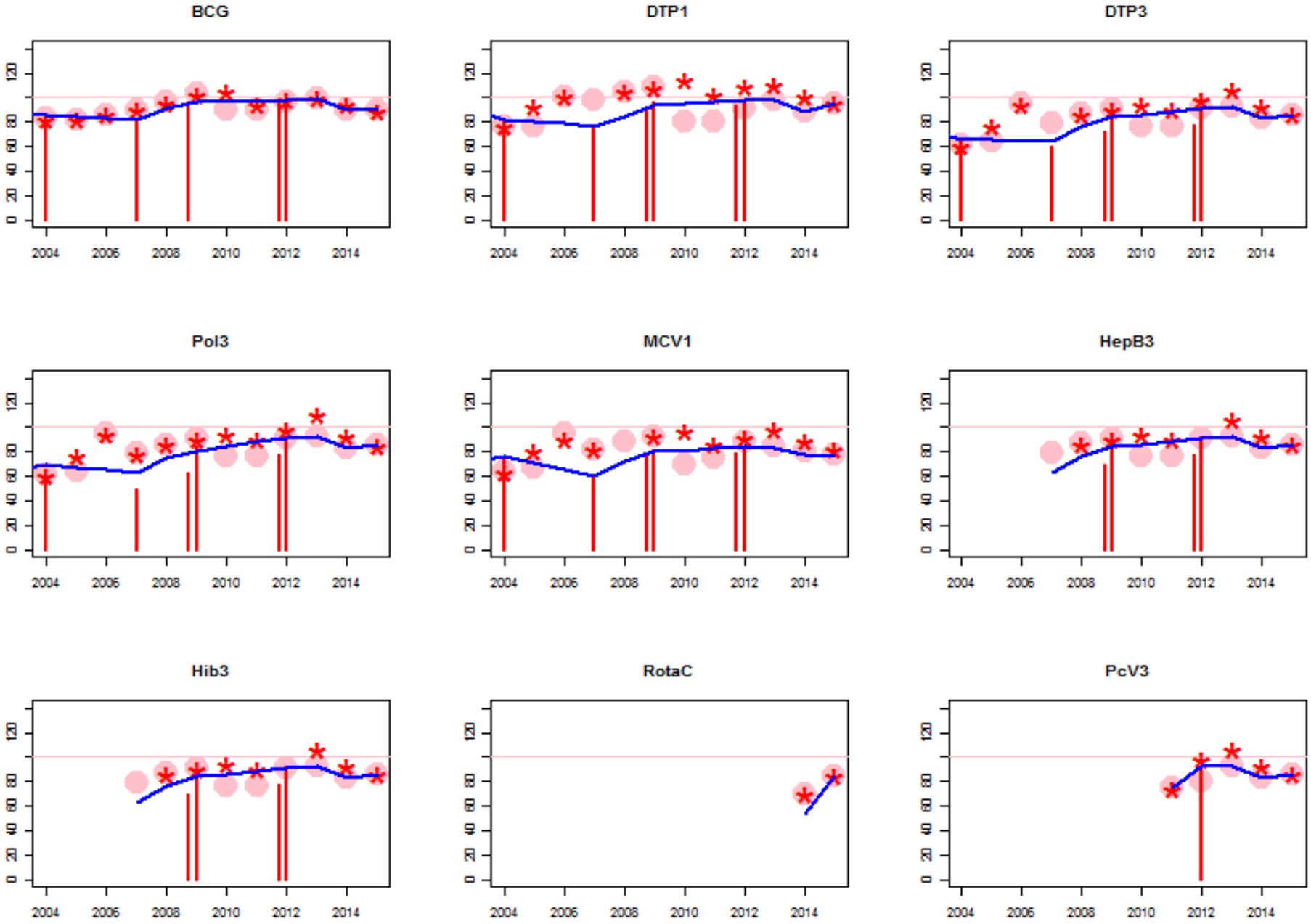
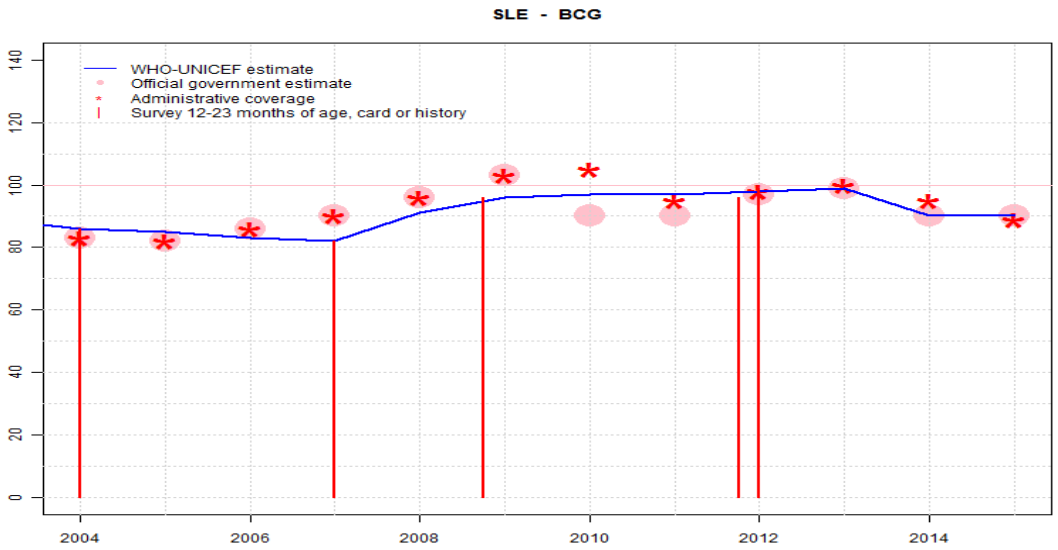

BCG
DTP1
DTP3
Pol3
MCV1
HepB3
Hib3
RotaC
PcV3
0
20
40
60
80
120
2004
2006
2008
2010
2012
2014

Sierra Leone - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	86	85	83	82	91	96	97	97	98	99	90	90
Estimate GoC	•	•	•	•	••	•	•	••	••	•	•	•
Official	83	82	86	90	96	103	90	90	97	99	90	90
Administrative	83	82	86	90	96	103	105	95	98	100	95	89
Survey	86	NA	NA	82	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: 2015 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:

2004: Estimate is based on survey results. Estimate challenged by: R-

2005: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: R-

2006: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: R-

2007: Estimate is based on survey results. Estimate challenged by: R-

2008: Reported data calibrated to 2007 and 2009 levels. GoC=S+ D+

2009: Estimate is based on survey results. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels.Reported data excluded. 103 percent greater than 100 percent. Estimate challenged by: R-

2010: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-

2011: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. GoC=S+ D+

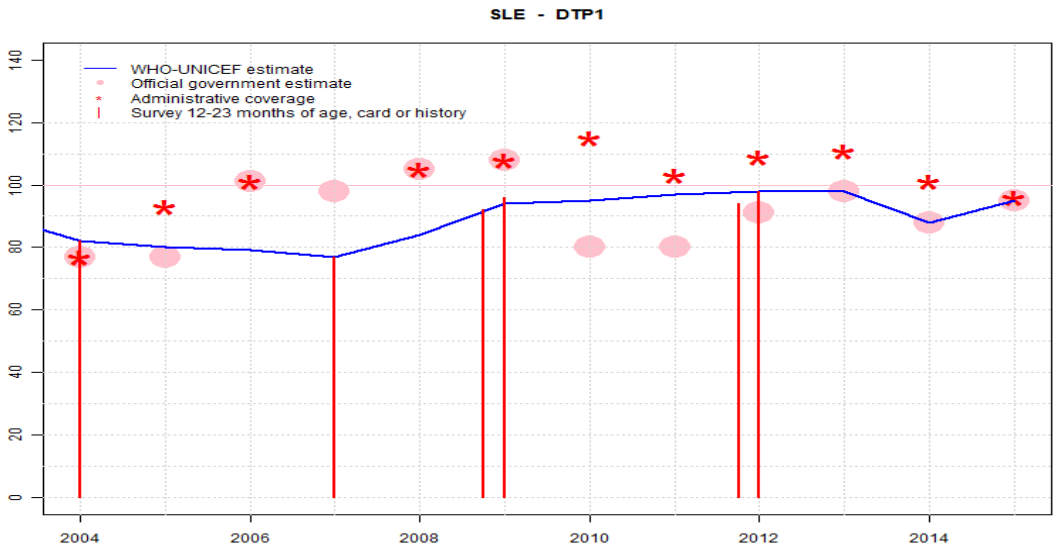
2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 98 percent based on 2 survey(s). Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Official estimates were based on targets from cMYP. GoC=S+ D+

2013: Estimate based on coverage reported by national government. Official estimate based on 2013 survey results. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Sierra Leone - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	82	80	79	77	84	94	95	97	98	98	88	95
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	77	77	101	98	105	108	80	80	91	98	88	95
Administrative	77	93	101	NA	105	108	115	103	109	111	101	96
Survey	82	NA	NA	77	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: 2015 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:

2004: Estimate is based on survey results. Estimate challenged by: R-

2005: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-R-

2006: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. 101 percent greater than 100 percent. Estimate challenged by: D-R-

2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 77 percent based on 1 survey(s). Estimate challenged by: R-

2008: Estimate based on reported data adjusted to level of 2007 survey. Reported data excluded. 105 percent greater than 100 percent. Estimate challenged by: D-R-

2009: Estimate is based on survey results, consistent with other antigens. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels.Reported data excluded. 108 percent greater than 100 percent. Estimate challenged by: D-R-

2010: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-

2011: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-

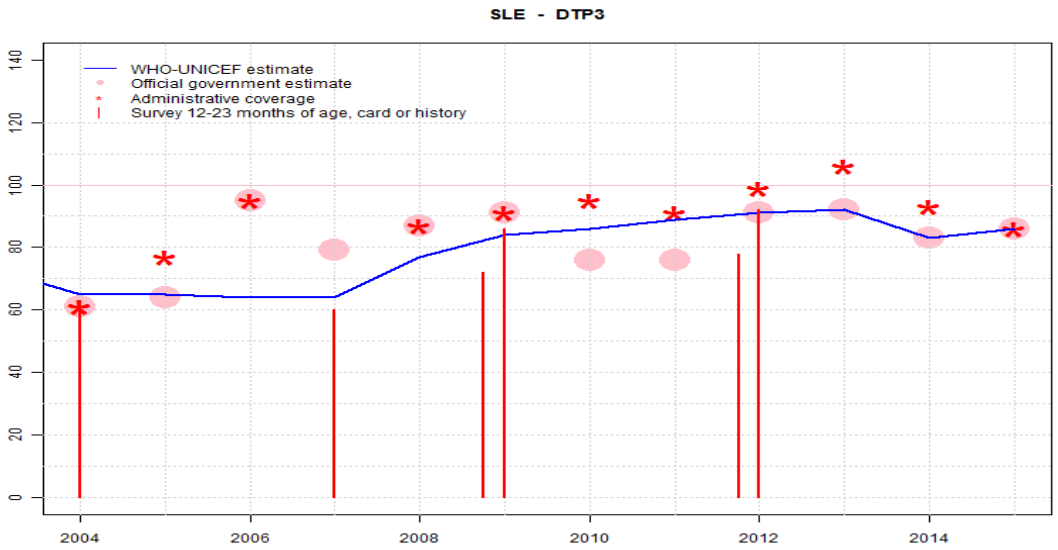
2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 96 percent based on 2 survey(s). Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Official estimates were based on targets from cMYP. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. Official estimate based on 2013 survey results. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Sierra Leone - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	65	65	64	64	77	84	86	89	91	92	83	86
Estimate GoC	•	•	•	•	••	•	•	••	•	•	•	•
Official	61	64	95	79	87	91	76	76	91	92	83	86
Administrative	61	77	95	NA	87	91	95	91	99	106	93	86
Survey	63	NA	NA	60	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: 2015 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:

2004: Estimate is based on survey results. Sierra Leone Multiple Indicator Cluster Survey 2005 card or history results of 63 percent modifed for recall bias to 65 percent based on 1st dose card or history coverage of 82 percent, 1st dose card only coverage of 47 percent and 3d dose card only coverage of 37 percent. Estimate challenged by: R-

2005: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-R-

2006: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Unexplained increase from 64 percent to 95 percent with decrease 79 percent. Estimate challenged by: D-R-

2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 64 percent based on 1 survey(s). Sierra Leone Demographic and Health Survey 2008 card or history results of 60 percent modifed for recall bias to 64 percent based on 1st dose card or history coverage of 77 percent, 1st dose card only coverage of 55 percent and 3d dose card only coverage of 46 percent. Estimate challenged by: R-

2008: Reported data calibrated to 2007 and 2009 levels. GoC=S+ D+

2009: Estimate is based on survey results, consistent with other antigens. Sierra Leone Immunization Cluster Coverage Survey 2010 card or history results of 86 percent modifed for recall bias to 84 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 74 percent and 3d dose card only coverage of 65 percent. Sierra Leone Multiple Indicator Cluster Survey 2010 card or history results of 72 percent modifed for recall bias to 83 percent based on 1st dose card or history coverage of 92 percent, 1st dose card only coverage of 64 percent and 3d dose card only coverage of 58 percent. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-R-

2010: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-

2011: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. GoC=S+ D+

2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 88 percent based on 2 survey(s). Sierra Leone Demographic and Health Survey 2013 card or history results of 78 percent modifed for recall bias to 85 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage

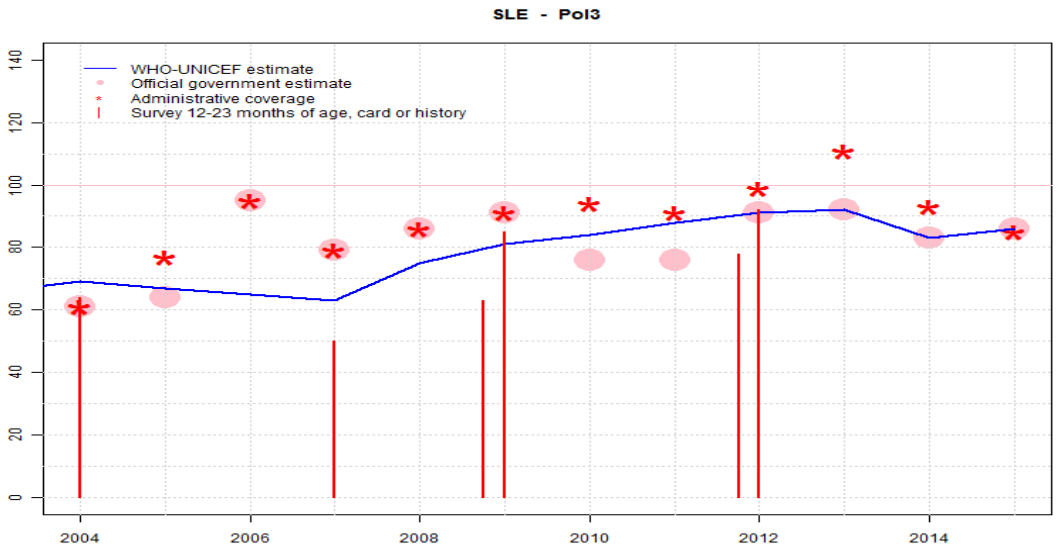
of 72 percent and 3d dose card only coverage of 65 percent. Report on Sierra Leone Routine Immunization Coverage Survey - 2013 card or history results of 92 percent modifed for recall bias to 90 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 91 percent and 3d dose card only coverage of 84 percent. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Official estimates were based on targets from cMYP. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. Official estimate based on 2013 survey results. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Sierra Leone - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	69	67	65	63	75	81	84	88	91	92	83	86
Estimate GoC	•	•	•	•	••	•	•	••	•	•	•	•
Official	61	64	95	79	86	91	76	76	91	92	83	86
Administrative	61	77	95	79	86	91	94	91	99	111	93	85
Survey	64	NA	NA	50	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: 2015 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:

2004: Estimate is based on survey results. Sierra Leone Multiple Indicator Cluster Survey 2005 card or history results of 64 percent modifed for recall bias to 69 percent based on 1st dose card or history coverage of 87 percent, 1st dose card only coverage of 48 percent and 3d dose card only coverage of 38 percent. Estimate challenged by: R-

2005: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-R-

2006: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Unexplained increase from 64 percent to 95 percent with decrease 79 percent. Estimate challenged by: D-R-

2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 63 percent based on 1 survey(s). Sierra Leone Demographic and Health Survey 2008 card or history results of 50 percent modifed for recall bias to 63 percent based on 1st dose card or history coverage of 76 percent, 1st dose card only coverage of 53 percent and 3d dose card only coverage of 44 percent. Estimate challenged by: D-R-

2008: Reported data calibrated to 2007 and 2009 levels. GoC=S+ D+

2009: Estimate is based on survey results, consistent with other antigens. Sierra Leone Immunization Cluster Coverage Survey 2010 card or history results of 85 percent modifed for recall bias to 84 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 73 percent and 3d dose card only coverage of 64 percent. Sierra Leone Multiple Indicator Cluster Survey 2010 card or history results of 63 percent modifed for recall bias to 78 percent based on 1st dose card or history coverage of 88 percent, 1st dose card only coverage of 61 percent and 3d dose card only coverage of 54 percent. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-R-

2010: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-

2011: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. GoC=S+ D+

2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 87 percent based on 2 survey(s). Sierra Leone Demographic and Health Survey 2013 card or history results of 78 percent modifed for recall bias to 84 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage

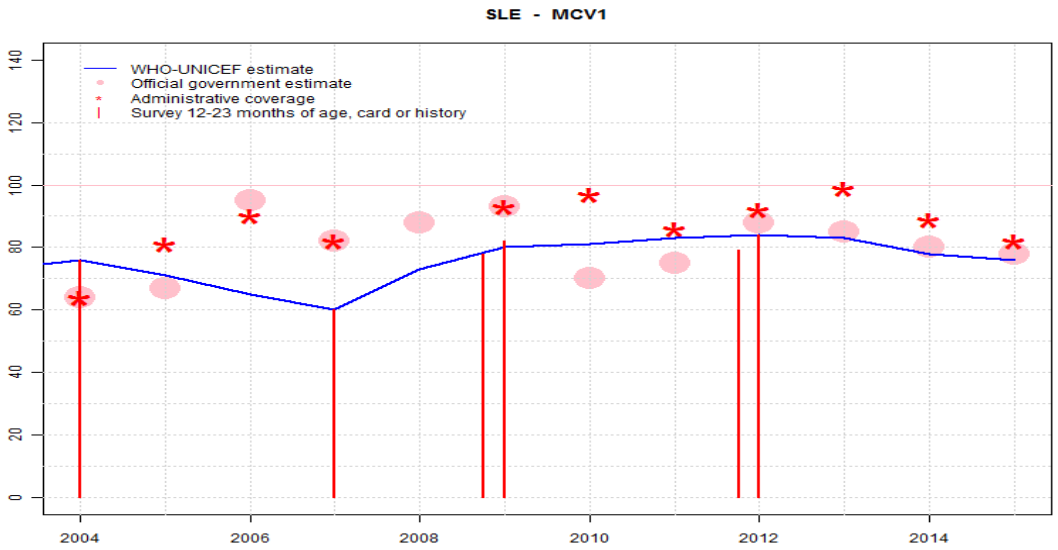
of 73 percent and 3d dose card only coverage of 65 percent. Report on Sierra Leone Routine Immunization Coverage Survey - 2013 card or history results of 92 percent modifed for recall bias to 90 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 89 percent and 3d dose card only coverage of 83 percent. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Official estimates were based on targets from cMYP. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. Official estimate based on 2013 survey results. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Sierra Leone - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	76	71	65	60	73	80	81	83	84	83	78	76
Estimate GoC	•	•	•	•	••	•	•	••	•	•	•	•
Official	64	67	95	82	88	93	70	75	88	85	80	78
Administrative	64	81	90	82	NA	93	97	86	92	99	89	82
Survey	76	NA	NA	60	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: 2015 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:

2004: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 76 percent based on 1 survey(s). Estimate challenged by: R-

2005: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-R-

2006: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Unexplained increase from 67 percent to 95 percent with decrease 82 percent. Estimate challenged by: D-R-

2007: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 60 percent based on 1 survey(s). Estimate challenged by: D-R-

2008: Reported data calibrated to 2007 and 2009 levels. GoC=S+

2009: Estimate is based on survey results, consistent with other antigens. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-R-

2010: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-

2011: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. GoC=S+ D+

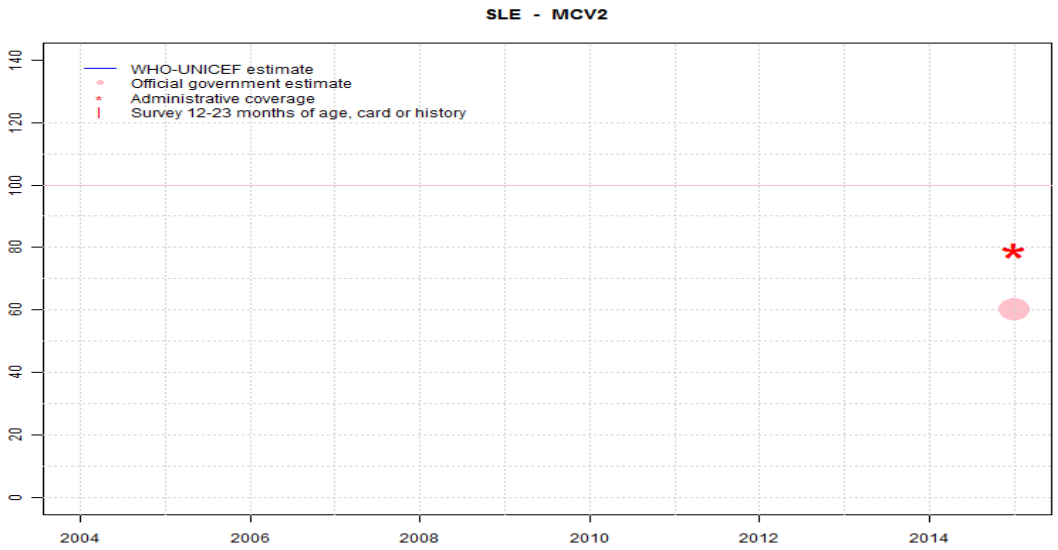
2012: Estimate based on survey result. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Official estimates were based on targets from cMYP. Estimate challenged by: D-R-

2013: Reported data calibrated to 2012 levels. Official estimate based on 2013 survey results. Estimate challenged by: D-

2014: Reported data calibrated to 2012 levels. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: D-

2015: Reported data calibrated to 2012 levels. Estimate challenged by: D-

Sierra Leone - MCV2



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	60
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	60
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	79
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

●● Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

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

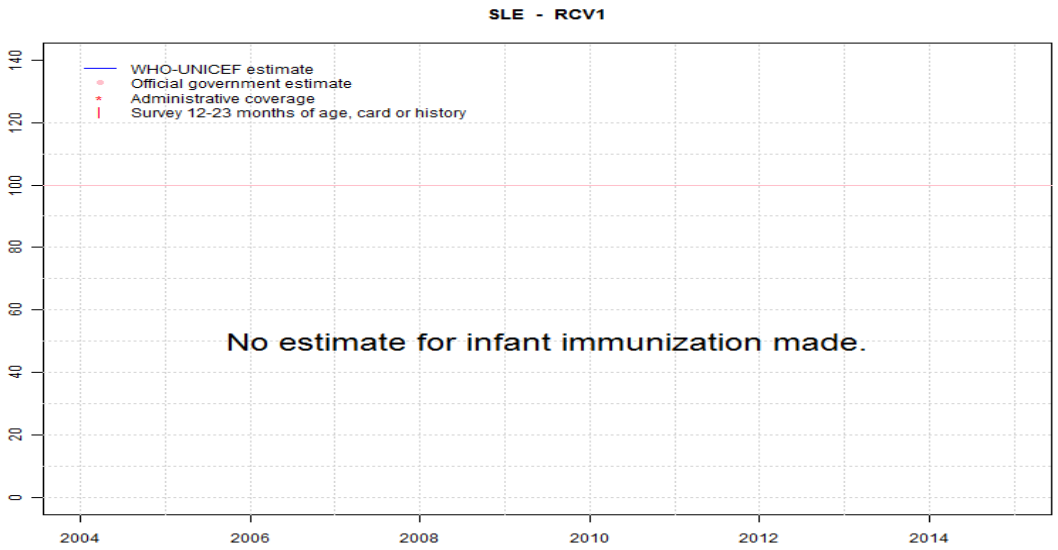
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

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

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Sierra Leone - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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.

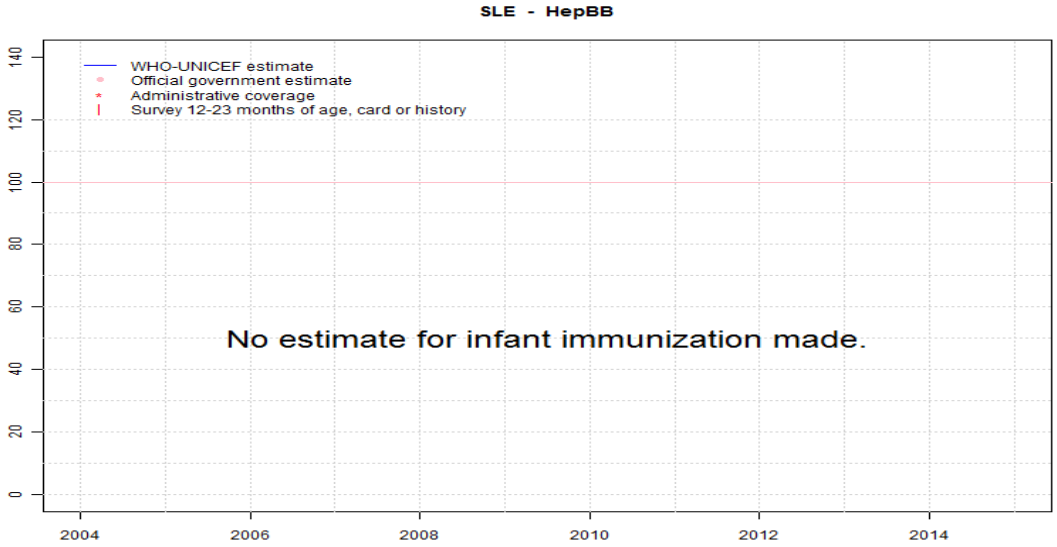
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Sierra Leone - HepBB



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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.

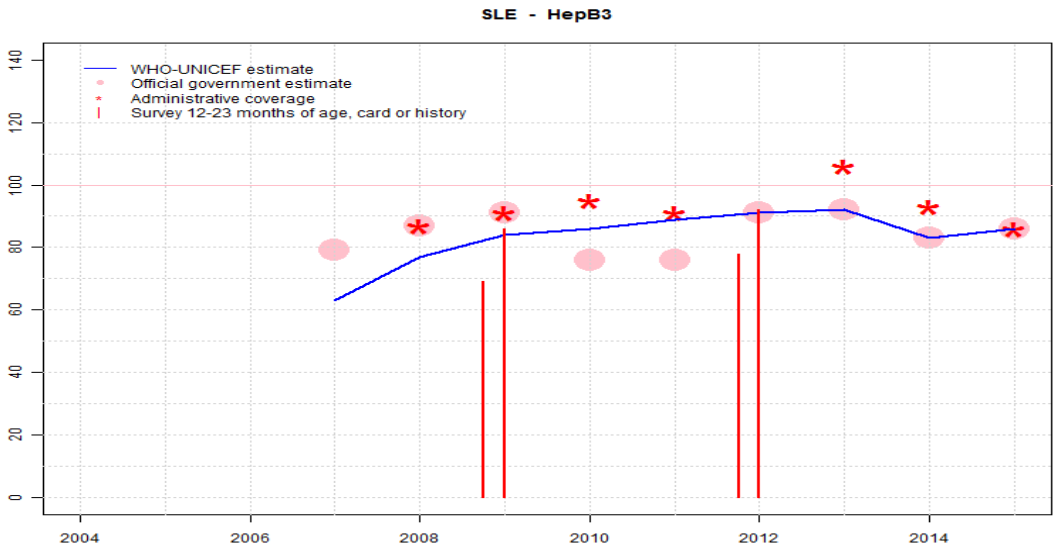
●●● Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk 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.

Sierra Leone - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	63	77	84	86	89	91	92	83	86
Estimate GoC	NA	NA	NA	•	••	•	•	••	••	•	•	•
Official	NA	NA	NA	79	87	91	76	76	91	92	83	86
Administrative	NA	NA	NA	NA	87	91	95	91	NA	106	93	86
Survey	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: 2015 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:

2007: Estimate follows DTP3 coverage levels. HepB vaccine introduced in 2007 Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: R-

2008: Reported data calibrated to 2007 and 2009 levels. GoC=S+ D+

2009: Estimate is based on survey results, consistent with other antigens. Sierra Leone Immunization Cluster Coverage Survey 2010 card or history results of 86 percent modifed for recall bias to 84 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 74 percent and 3d dose card only coverage of 65 percent. Sierra Leone Multiple Indicator Cluster Survey 2010 card or history results of 69 percent modifed for recall bias to 80 percent based on 1st dose card or history coverage of 86 percent, 1st dose card only coverage of 60 percent and 3d dose card only coverage of 56 percent. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: R-

2010: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-

2011: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. GoC=S+ D+

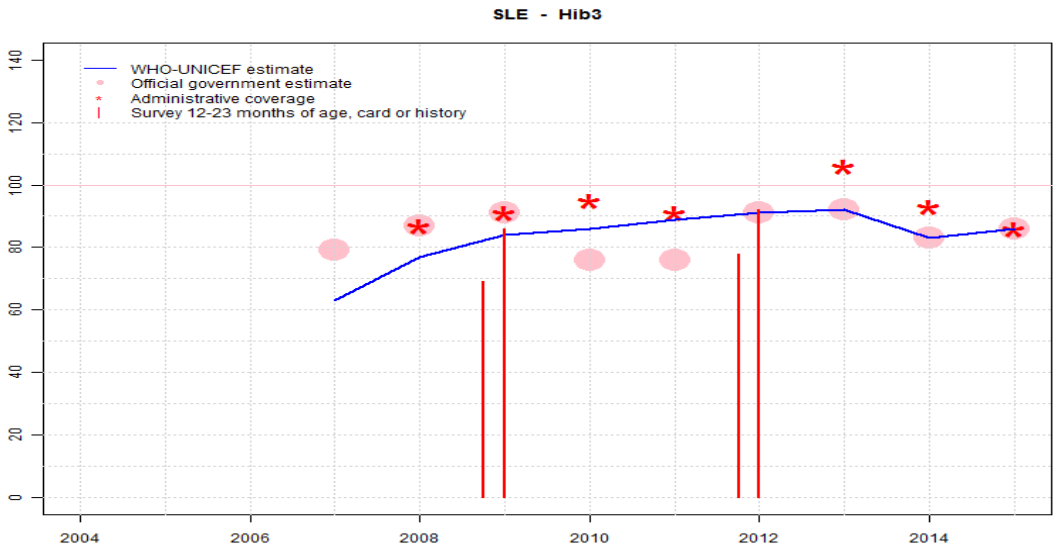
2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 88 percent based on 2 survey(s). Sierra Leone Demographic and Health Survey 2013 card or history results of 78 percent modifed for recall bias to 85 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 65 percent. Report on Sierra Leone Routine Immunization Coverage Survey - 2013 card or history results of 92 percent modifed for recall bias to 90 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 91 percent and 3d dose card only coverage of 84 percent. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Official estimates were based on targets from cMYP. GoC=R+ S+

2013: Estimate based on coverage reported by national government. Official estimate based on 2013 survey results. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Sierra Leone - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	63	77	84	86	89	91	92	83	86
Estimate GoC	NA	NA	NA	•	••	•	•	••	••	•	•	•
Official	NA	NA	NA	79	87	91	76	76	91	92	83	86
Administrative	NA	NA	NA	NA	87	91	95	91	NA	106	93	86
Survey	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: 2015 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:

2007: Estimate follows DTP3 coverage levels. Hib vaccine introduced in 2007 Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: R-

2008: Reported data calibrated to 2007 and 2009 levels. GoC=S+ D+

2009: Estimate is based on survey results, consistent with other antigens. Sierra Leone Immunization Cluster Coverage Survey 2010 card or history results of 86 percent modifed for recall bias to 84 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 74 percent and 3d dose card only coverage of 65 percent. Sierra Leone Multiple Indicator Cluster Survey 2010 card or history results of 69 percent modifed for recall bias to 80 percent based on 1st dose card or history coverage of 86 percent, 1st dose card only coverage of 60 percent and 3d dose card only coverage of 56 percent. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: R-

2010: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-

2011: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. GoC=S+ D+

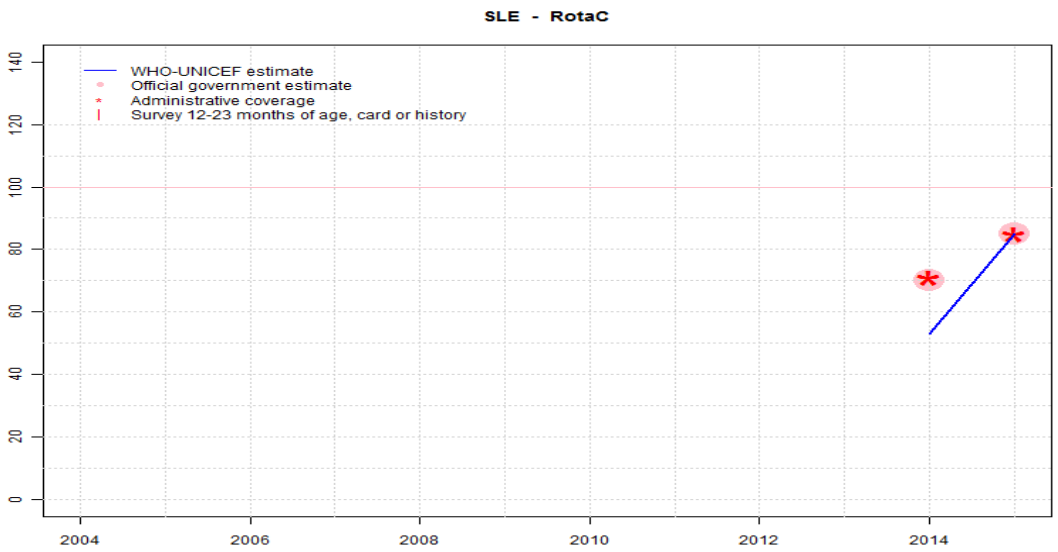
2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 88 percent based on 2 survey(s). Sierra Leone Demographic and Health Survey 2013 card or history results of 78 percent modifed for recall bias to 85 percent based on 1st dose card or history coverage of 94 percent, 1st dose card only coverage of 72 percent and 3d dose card only coverage of 65 percent. Report on Sierra Leone Routine Immunization Coverage Survey - 2013 card or history results of 92 percent modifed for recall bias to 90 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 91 percent and 3d dose card only coverage of 84 percent. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Official estimates were based on targets from cMYP. GoC=R+ S+

2013: Estimate based on coverage reported by national government. Official estimate based on 2013 survey results. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Sierra Leone - RotaC



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	53	85
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70	85
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	71	85
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: 2015 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.

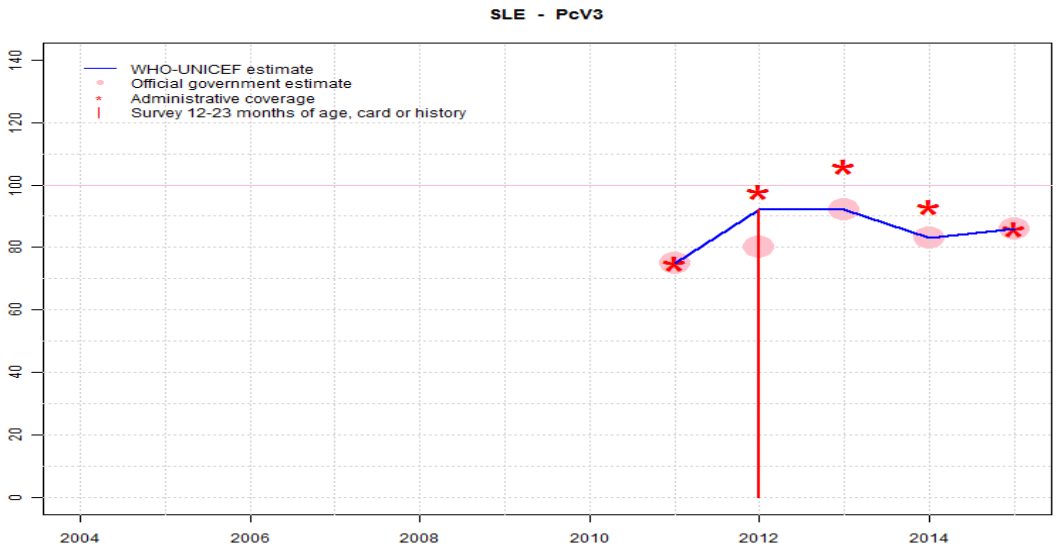
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2014: Rotavirus vaccine introduced during 2014. Programme achieved 71 percent coverage among 75 percent of the target population. Estimate is based on national target population. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: R-

2015: Following introduction, programme reports delivery to national target population. Estimate challenged by: D-

Sierra Leone - PcV3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	75	92	92	83	86
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	75	80	92	83	86
Administrative	NA	NA	NA	NA	NA	NA	NA	75	98	106	93	86
Survey	NA	NA	NA	NA	NA	NA	NA	NA	92	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: 2015 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:

2011: Pneumococcal conjugate vaccine introduced 2011. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: R-

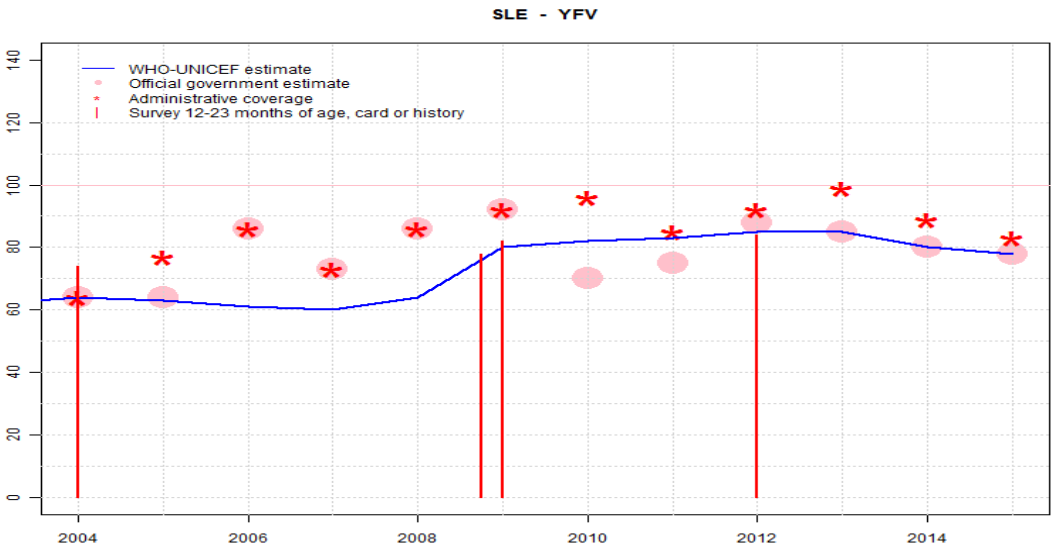
2012: Estimate based on extrapolation from data reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Report on Sierra Leone Routine Immunization Coverage Survey - 2013 card or history results of 92 percent modifed for recall bias to 90 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 89 percent and 3d dose card only coverage of 83 percent. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Official estimates were based on targets from cMYP. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. Official estimate based on 2013 survey results. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Sierra Leone - YFV



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	64	63	61	60	64	80	82	83	85	85	80	78
Estimate GoC	•	•	•	•	•	•	•	••	•	•	•	•
Official	64	64	86	73	86	92	70	75	88	85	80	78
Administrative	64	77	86	73	86	92	96	85	92	99	89	83
Survey	74	NA	NA	NA	NA	*	NA	NA	84	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: 2015 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:

2004: Estimate based on coverage reported by national government supported by survey. Survey evidence of 74 percent based on 1 survey(s). Estimate challenged by: D-

2005: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-R-

2006: Estimate based on interpolation between 2004 and 2007 levels. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Unexplained increase from 64 percent to 86 percent with decrease 73 percent. Estimate challenged by: D-R-

2007: Estimate follows MCV coverage levels. Reported data excluded. Decline in reported coverage from 86 percent to 73 percent with increase to 86 percent. Estimate challenged by: D-R-

2008: Estimate based on reported data adjusted to MCV level of 2007 survey. Estimate challenged by: D-R-

2009: Estimate is based on survey results, consistent with other antigens. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-R-

2010: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Estimate challenged by: D-

2011: Reported data calibrated to 2009 and 2012 levels. Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. GoC=S+ D+

2012: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 84 percent based on 1 survey(s). Reported data excluded. Nationally reported data ignore most recent survey in the downward adjustment of administrative coverage levels. Official estimates were based on targets from cMYP. Estimate challenged by: D-

2013: Estimate based on coverage reported by national government. Official estimate based on 2013 survey results. Estimate challenged by: D-

2014: Estimate based on coverage reported by national government. Reported declines in reported coverage due in part to Ebola virus disease outbreak during 2014. Inconsistent and unexplained adjustment made to official coverage from administrative data. Estimate challenged by: D-

2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Sierra Leone - survey details

2012 Report on Sierra Leone Routine Immunization Coverage Survey - 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	99	12-23 m	4282	93
BCG	Card or Scar	92	12-23 m	-	93
DTP1	Card	91	12-23 m	-	93
DTP1	Card or History	98	12-23 m	4282	93
DTP3	Card	84	12-23 m	-	93
DTP3	Card or History	92	12-23 m	4282	93
HepB1	Card	91	12-23 m	-	93
HepB1	Card or History	98	12-23 m	4282	93
HepB3	Card	84	12-23 m	-	93
HepB3	Card or History	92	12-23 m	4282	93
Hib1	Card	91	12-23 m	-	93
Hib1	Card or History	98	12-23 m	4282	93
Hib3	Card	84	12-23 m	-	93
Hib3	Card or History	92	12-23 m	4282	93
MCV1	Card	74	12-23 m	-	93
MCV1	Card or History	84	12-23 m	4282	93
PcV1	Card	89	12-23 m	-	93
PcV1	Card or History	97	12-23 m	4282	93
PcV3	Card	83	12-23 m	-	93
PcV3	Card or History	92	12-23 m	4282	93
Pol1	Card	89	12-23 m	-	93
Pol1	Card or History	97	12-23 m	4282	93
Pol3	Card	83	12-23 m	-	93
Pol3	Card or History	92	12-23 m	4282	93
YFV	Card	74	12-23 m	-	93
YFV	Card or History	84	12-23 m	4282	93

2012 Sierra Leone Demographic and Health Survey 2013

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	95	12-23 m	2169	73
BCG	Card	73	12-23 m	1590	73
BCG	Card or History	96	12-23 m	2169	73
BCG	History	23	12-23 m	578	73
DTP1	C or H <12 months	93	12-23 m	2169	73
DTP1	Card	72	12-23 m	1590	73
DTP1	Card or History	94	12-23 m	2169	73
DTP1	History	21	12-23 m	578	73
DTP3	C or H <12 months	75	12-23 m	2169	73
DTP3	Card	65	12-23 m	1590	73
DTP3	Card or History	78	12-23 m	2169	73
DTP3	History	13	12-23 m	578	73
HepB1	C or H <12 months	93	12-23 m	2169	73
HepB1	Card	72	12-23 m	1590	73
HepB1	Card or History	94	12-23 m	2169	73
HepB1	History	21	12-23 m	578	73
HepB3	C or H <12 months	75	12-23 m	2169	73
HepB3	Card	65	12-23 m	1590	73
HepB3	Card or History	78	12-23 m	2169	73
HepB3	History	13	12-23 m	578	73
Hib1	C or H <12 months	93	12-23 m	2169	73
Hib1	Card	72	12-23 m	1590	73
Hib1	Card or History	94	12-23 m	2169	73
Hib1	History	21	12-23 m	578	73
Hib3	C or H <12 months	75	12-23 m	2169	73
Hib3	Card	65	12-23 m	1590	73
Hib3	Card or History	78	12-23 m	2169	73
Hib3	History	13	12-23 m	578	73
MCV1	C or H <12 months	68	12-23 m	2169	73
MCV1	Card	58	12-23 m	1590	73
MCV1	Card or History	79	12-23 m	2169	73
MCV1	History	20	12-23 m	578	73
Pol1	C or H <12 months	93	12-23 m	2169	73
Pol1	Card	73	12-23 m	1590	73
Pol1	Card or History	94	12-23 m	2169	73
Pol1	History	21	12-23 m	578	73
Pol3	C or H <12 months	74	12-23 m	2169	73
Pol3	Card	65	12-23 m	1590	73
Pol3	Card or History	78	12-23 m	2169	73
Pol3	History	13	12-23 m	578	73

2009 Sierra Leone Immunization Cluster Coverage Survey 2010

Sierra Leone - survey details

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	78	12-23 m	-	78
BCG	Card or History	96	12-23 m	4011	78
DTP1	Card	74	12-23 m	-	78
DTP1	Card or History	96	12-23 m	4011	78
DTP3	Card	65	12-23 m	-	78
DTP3	Card or History	86	12-23 m	4011	78
HepB1	Card	74	12-23 m	-	78
HepB1	Card or History	96	12-23 m	4011	78
HepB3	Card	65	12-23 m	-	78
HepB3	Card or History	86	12-23 m	4011	78
Hib1	Card	74	12-23 m	-	78
Hib1	Card or History	96	12-23 m	4011	78
Hib3	Card	65	12-23 m	-	78
Hib3	Card or History	86	12-23 m	4011	78
MCV1	Card	57	12-23 m	-	78
MCV1	Card or History	78	12-23 m	4011	78
Pol1	Card	73	12-23 m	-	78
Pol1	Card or History	96	12-23 m	4011	78
Pol3	Card	64	12-23 m	-	78
Pol3	Card or History	85	12-23 m	4011	78
YFV	Card	57	12-23 m	-	78
YFV	Card or History	78	12-23 m	4011	78

2009 Sierra Leone Multiple Indicator Cluster Survey 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	95	12-23 m	1502	68
BCG	Card	67	12-23 m	1502	68
BCG	Card or History	96	12-23 m	1502	68
BCG	History	29	12-23 m	1502	68
DTP1	C or H <12 months	89	12-23 m	1502	68
DTP1	Card	64	12-23 m	1502	68
DTP1	Card or History	92	12-23 m	1502	68
DTP1	History	28	12-23 m	1502	68
DTP3	C or H <12 months	67	12-23 m	1502	68
DTP3	Card	58	12-23 m	1502	68
DTP3	Card or History	72	12-23 m	1502	68
DTP3	History	13	12-23 m	1502	68
HepB1	C or H <12 months	83	12-23 m	1502	68
HepB1	Card	60	12-23 m	1502	68
HepB1	Card or History	86	12-23 m	1502	68
HepB1	History	26	12-23 m	1502	68
HepB3	C or H <12 months	64	12-23 m	1502	68
HepB3	Card	56	12-23 m	1502	68
HepB3	Card or History	69	12-23 m	1502	68
HepB3	History	13	12-23 m	1502	68
Hib1	C or H <12 months	83	12-23 m	1502	68
Hib1	Card	60	12-23 m	1502	68
Hib1	Card or History	86	12-23 m	1502	68
Hib1	History	26	12-23 m	1502	68
Hib3	C or H <12 months	64	12-23 m	1502	68
Hib3	Card	56	12-23 m	1502	68
Hib3	Card or History	69	12-23 m	1502	68
Hib3	History	13	12-23 m	1502	68
MCV1	C or H <12 months	68	12-23 m	1502	68
MCV1	Card	52	12-23 m	1502	68
MCV1	Card or History	82	12-23 m	1502	68
MCV1	History	29	12-23 m	1502	68
Pol1	C or H <12 months	86	12-23 m	1502	68
Pol1	Card	61	12-23 m	1502	68
Pol1	Card or History	88	12-23 m	1502	68
Pol1	History	27	12-23 m	1502	68
Pol3	C or H <12 months	58	12-23 m	1502	68
Pol3	Card	54	12-23 m	1502	68
Pol3	Card or History	63	12-23 m	1502	68
Pol3	History	9	12-23 m	1502	68
YFV	C or H <12 months	68	12-23 m	1502	68
YFV	Card	52	12-23 m	1502	68
YFV	Card or History	82	12-23 m	1502	68
YFV	History	29	12-23 m	1502	68

2007 Sierra Leone Demographic and Health Survey 2008

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	80	12-23 m	1060	60
BCG	Card	59	12-23 m	1060	60
BCG	Card or History	82	12-23 m	1060	60

BCG	History	23	12-23 m	1060	60
DTP1	C or H <12 months	75	12-23 m	1060	60
DTP1	Card	55	12-23 m	1060	60
DTP1	Card or History	77	12-23 m	1060	60
DTP1	History	21	12-23 m	1060	60
DTP3	C or H <12 months	55	12-23 m	1060	60
DTP3	Card	46	12-23 m	1060	60
DTP3	Card or History	60	12-23 m	1060	60
DTP3	History	15	12-23 m	1060	60
MCV1	C or H <12 months	46	12-23 m	1060	60
MCV1	Card	40	12-23 m	1060	60
MCV1	Card or History	60	12-23 m	1060	60
MCV1	History	20	12-23 m	1060	60
Pol1	C or H <12 months	74	12-23 m	1060	60
Pol1	Card	53	12-23 m	1060	60
Pol1	Card or History	76	12-23 m	1060	60
Pol1	History	22	12-23 m	1060	60
Pol3	C or H <12 months	45	12-23 m	1060	60
Pol3	Card	44	12-23 m	1060	60
Pol3	Card or History	50	12-23 m	1060	60
Pol3	History	6	12-23 m	1060	60

2004 Sierra Leone Multiple Indicator Cluster Survey 2005

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	84	12-23 m	1074	53
BCG	Card	50	12-23 m	1074	53
BCG	Card or History	86	12-23 m	1074	53
BCG	History	36	12-23 m	1074	53
DTP1	C or H <12 months	78	12-23 m	1074	53
DTP1	Card	47	12-23 m	1074	53
DTP1	Card or History	82	12-23 m	1074	53
DTP1	History	35	12-23 m	1074	53
DTP3	C or H <12 months	56	12-23 m	1074	53
DTP3	Card	37	12-23 m	1074	53
DTP3	Card or History	63	12-23 m	1074	53
DTP3	History	25	12-23 m	1074	53
MCV1	C or H <12 months	62	12-23 m	1074	53
MCV1	Card	33	12-23 m	1074	53
MCV1	Card or History	76	12-23 m	1074	53
MCV1	History	43	12-23 m	1074	53
Pol1	C or H <12 months	84	12-23 m	1074	53
Pol1	Card	48	12-23 m	1074	53
Pol1	Card or History	87	12-23 m	1074	53
Pol1	History	38	12-23 m	1074	53
Pol3	C or H <12 months	57	12-23 m	1074	53
Pol3	Card	38	12-23 m	1074	53
Pol3	Card or History	64	12-23 m	1074	53
Pol3	History	26	12-23 m	1074	53
YFV	C or H <12 months	60	12-23 m	1074	53
YFV	Card	31	12-23 m	1074	53
YFV	Card or History	74	12-23 m	1074	53
YFV	History	44	12-23 m	1074	53

2000 Sierra Leone, EPI National Coverage Evaluation Survey 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	74	12-23 m	3385	74
DTP1	Card or History	64	12-23 m	3385	74
DTP3	Card or History	44	12-23 m	3385	74
MCV1	Card or History	37	12-23 m	3385	74
Pol1	Card or History	66	12-23 m	3385	74
Pol3	Card or History	46	12-23 m	3385	74

1999 Sierra Leone, Multi-Indicator Cluster Survey-MICS2, Final Report, 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	73	12-23 m	547	35
DTP1	Card or History	68	12-23 m	547	35
DTP3	Card or History	46	12-23 m	547	35
MCV1	Card or History	62	12-23 m	547	35
Pol1	Card or History	82	12-23 m	547	35
Pol3	Card or History	61	12-23 m	547	35

Sierra Leone - survey details

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

Sierra Leone

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 (%)
2004	81
2005	83
2006	85
2007	94
2008	97
2009	97
2010	85
2011	85
2012	87
2013	87
2014	85
2015	85

[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.