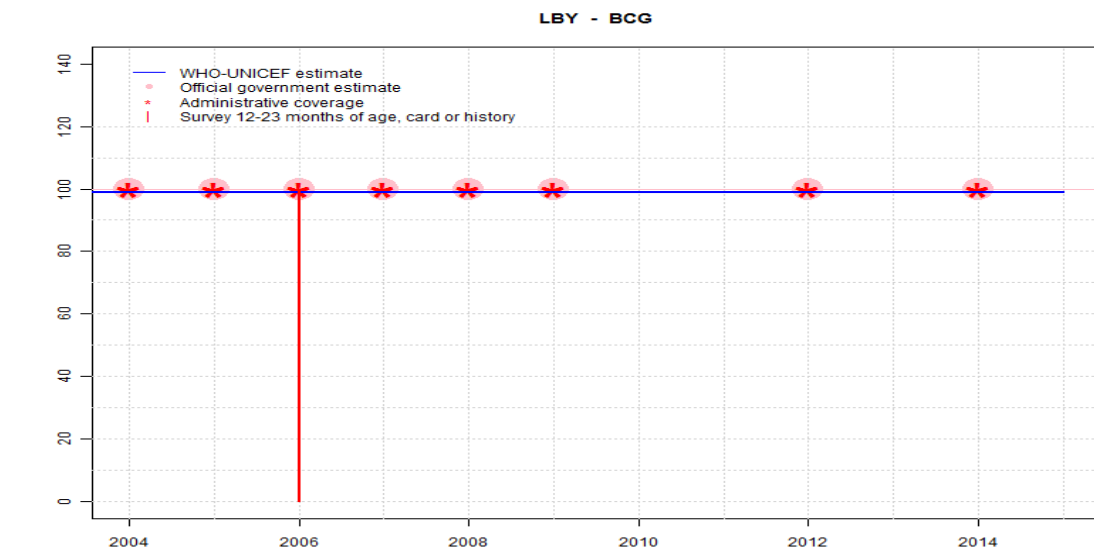


Libya - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	99	100	100	100	100	NA	NA	100	NA	100	NA
Estimate GoC	•••	•	•••	•	•	•	•	•	•	•	•	•
Official	100	100	100	100	100	100	NA	NA	100	NA	100	NA
Administrative	100	100	100	100	100	100	NA	NA	100	NA	100	NA
Survey	NA	NA	100	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.

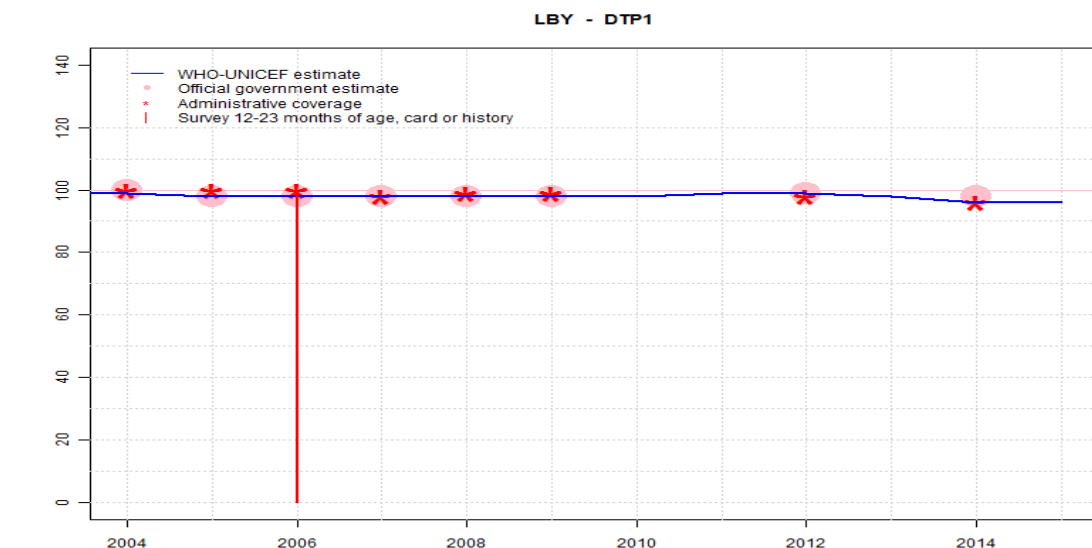
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 100 percent based on 1 survey(s). GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2014: Estimate based on reported administrative data. Declines in reported coverage are unexplained given increases in the reported number of children vaccinated. Reported coverage levels may carry a risk of overestimation given the use of the number of children vaccinated with BCG as the target population and civil unrest in the country. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-
- 2015: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	98	98	98	98	98	98	99	99	98	96	96
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	100	98	98	98	98	98	NA	NA	99	NA	98	NA
Administrative	100	100	100	98	99	99	NA	NA	98	NA	96	NA
Survey	NA	NA	100	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.

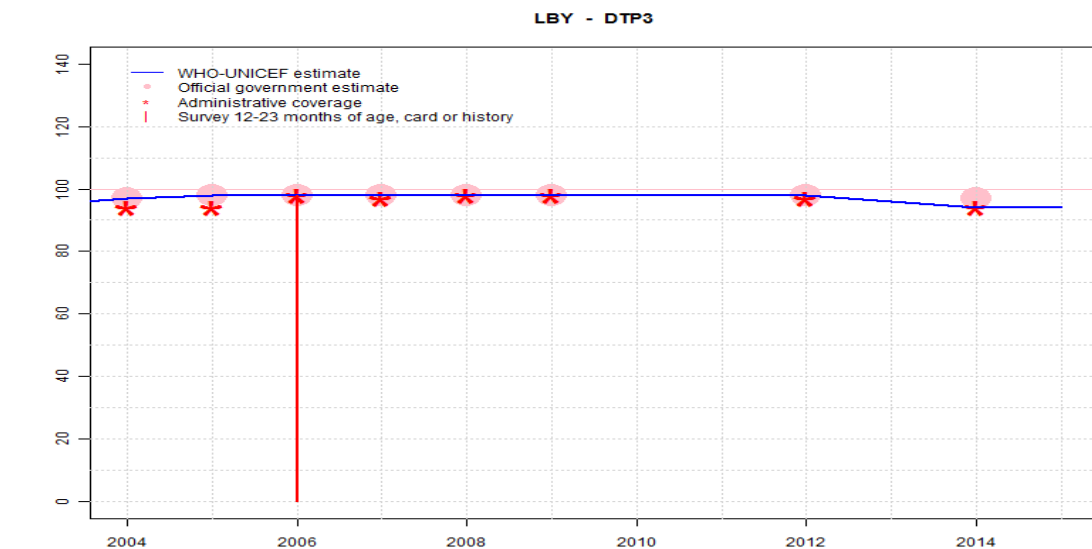
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 100 percent based on 1 survey(s). Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2014: Estimate based on reported administrative data. Declines in reported coverage are unexplained given increases in the reported number of children vaccinated. Reported coverage levels may carry a risk of overestimation given the use of the number of children vaccinated with BCG as the target population and civil unrest in the country. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-
- 2015: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	97	98	98	98	98	98	98	98	98	96	94	94
Estimate GoC	●●●	●●●	●●●	●●●	●	●	●	●	●	●	●	●
Official	97	98	98	98	98	98	NA	NA	98	NA	97	NA
Administrative	94	94	98	97	98	98	NA	NA	97	NA	94	NA
Survey	NA	NA	98	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.

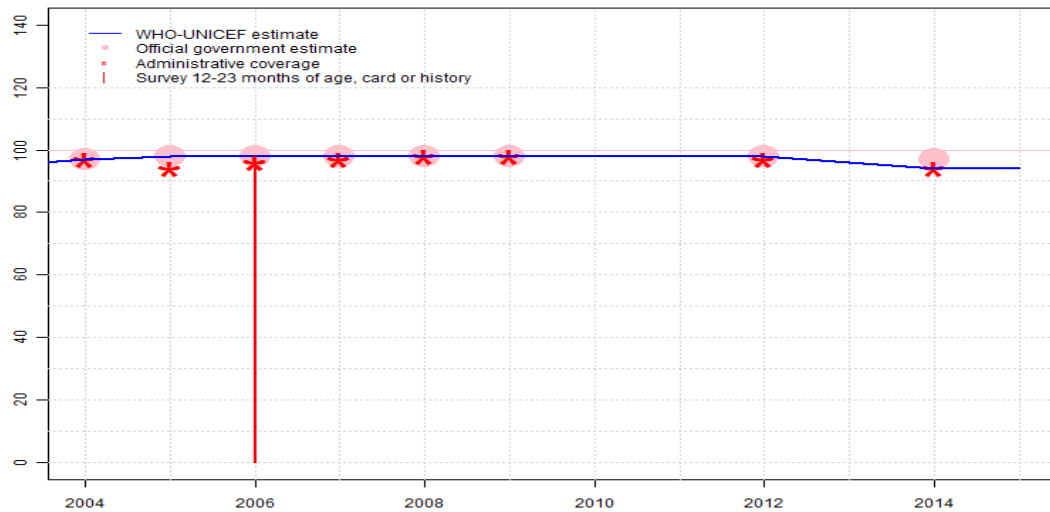
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2014: Estimate based on reported administrative data. Declines in reported coverage are unexplained given increases in the reported number of children vaccinated. Reported coverage levels may carry a risk of overestimation given the use of the number of children vaccinated with BCG as the target population and civil unrest in the country. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-
- 2015: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - Pol3

LBY - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	97	98	98	98	98	98	98	98	98	96	94	94
Estimate GoC	•	•••	•••	•••	•	•	•	•	•	•	•	•
Official	97	98	98	98	98	98	NA	NA	98	NA	97	NA
Administrative	97	94	96	97	98	98	NA	NA	97	NA	94	NA
Survey	NA	NA	98	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.

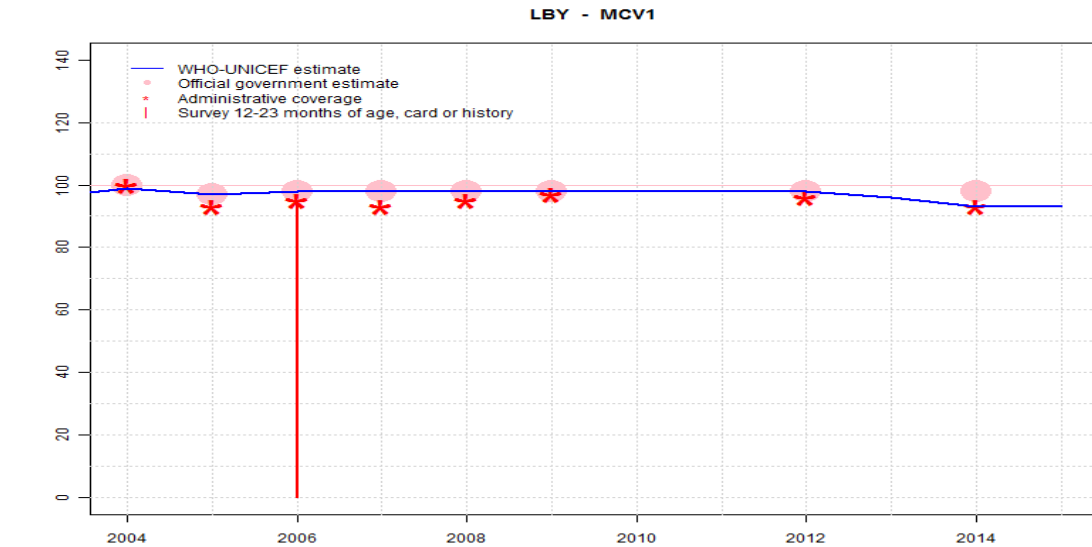
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2014: Estimate based on reported administrative data. Declines in reported coverage are unexplained given increases in the reported number of children vaccinated. Reported coverage levels may carry a risk of overestimation given the use of the number of children vaccinated with BCG as the target population and civil unrest in the country. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-
- 2015: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	97	98	98	98	98	98	98	98	96	93	93
Estimate GoC	•	•••	•••	•••	•	•	•	•	•	•	•	•
Official	100	97	98	98	98	98	NA	NA	98	NA	98	NA
Administrative	100	93	95	93	95	97	NA	NA	96	NA	93	NA
Survey	NA	NA	94	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.

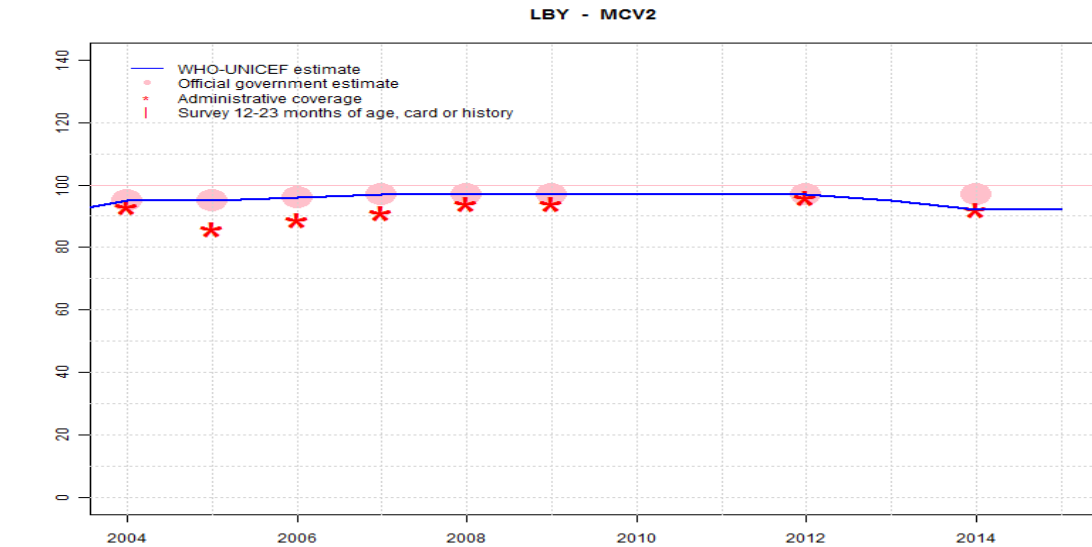
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2014: Estimate based on reported administrative data. Declines in reported coverage are unexplained given increases in the reported number of children vaccinated. Reported coverage levels may carry a risk of overestimation given the use of the number of children vaccinated with BCG as the target population and civil unrest in the country. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-
- 2015: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - MCV2



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	95	95	96	97	97	97	97	97	97	95	92	92
Estimate GoC	••	••	••	••	•	•	•	•	•	•	•	•
Official	95	95	96	97	97	97	NA	NA	97	NA	97	NA
Administrative	93	86	89	91	94	94	NA	NA	96	NA	92	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.

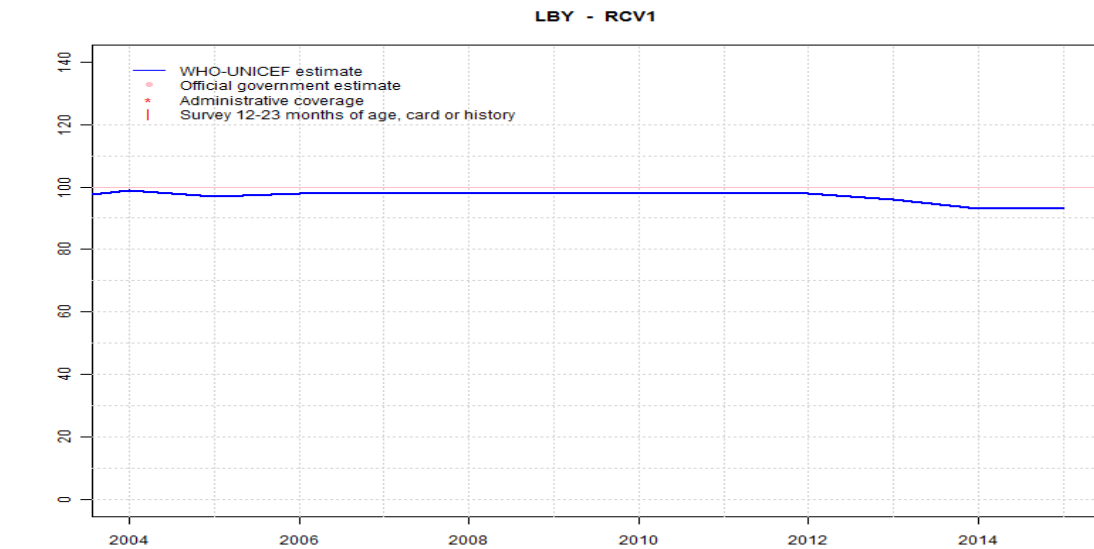
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

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

- 2004: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on interpolation between reported values. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on interpolation between reported values. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2014: Estimate based on reported administrative estimate. Declines in reported coverage are unexplained given increases in the reported number of children vaccinated. Reported coverage levels may carry a risk of overestimation given the use of the number of children vaccinated with BCG as the target population and civil unrest in the country. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-
- 2015: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - RCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	97	98	98	98	98	98	98	98	96	93	93
Estimate GoC	•	•••	•••	•••	•	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	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.

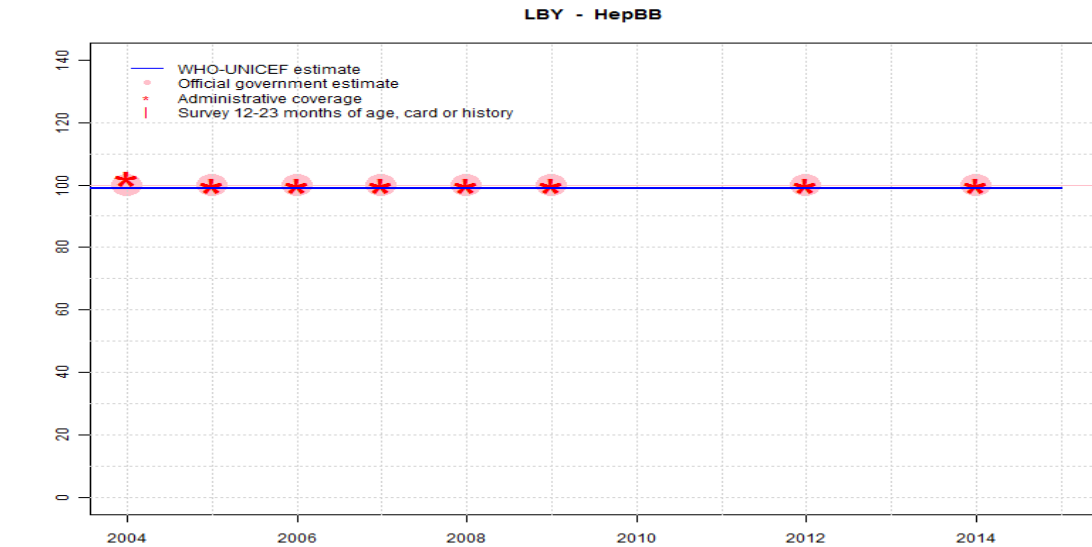
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

- 2004: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2005: Estimate based on estimated MCV1. GoC=R+ S+ D+
- 2006: Estimate based on estimated MCV1. GoC=R+ S+ D+
- 2007: Estimate based on estimated MCV1. GoC=R+ S+ D+
- 2008: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2009: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2010: Estimate based on estimated MCV1. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on estimated MCV1. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on estimated MCV1. Estimate challenged by: D-
- 2013: Estimate based on estimated MCV1. GoC=No accepted empirical data
- 2014: Estimate based on estimated MCV1. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-
- 2015: Estimate based on estimated MCV1. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	99	99	99	99	99	99	99	99	99	99	99
Estimate GoC	•	•	••	•	•	•	•	•	•	•	•	•
Official	100	100	100	100	100	100	NA	NA	100	NA	100	NA
Administrative	102	100	100	100	100	100	NA	NA	100	NA	100	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.

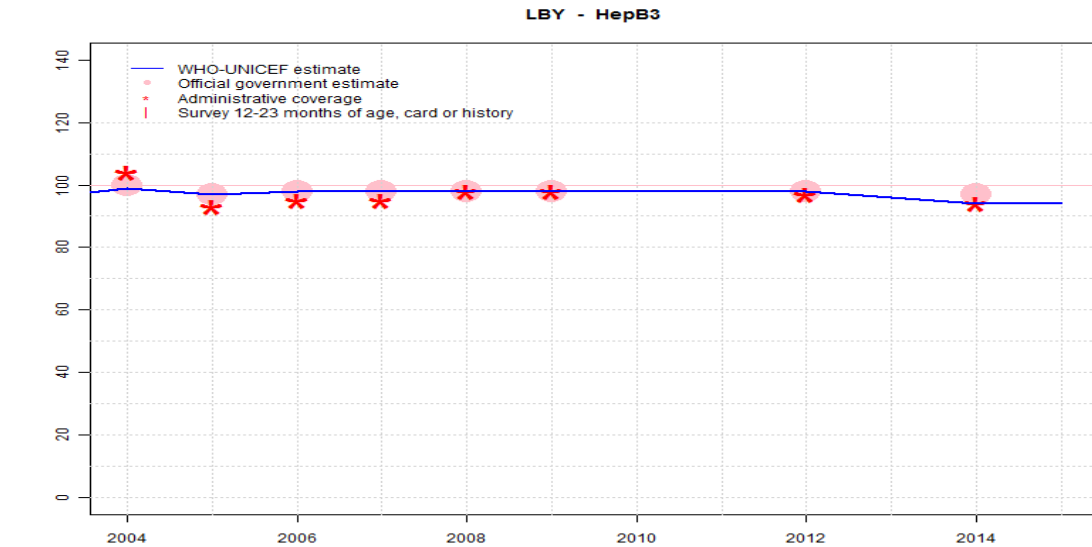
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

Description:

- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. GoC=R+D+
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on interpolation between reported values. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on interpolation between reported values. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2014: Estimate based on reported administrative estimate. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. GoC=Assigned by working group. Consistent with other vaccines.
- 2015: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	99	97	98	98	98	98	98	98	98	96	94	94
Estimate GoC	•	••	••	••	•	•	•	•	•	•	•	•
Official	100	97	98	98	98	98	NA	NA	98	NA	97	NA
Administrative	104	93	95	95	98	98	NA	NA	97	NA	94	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.

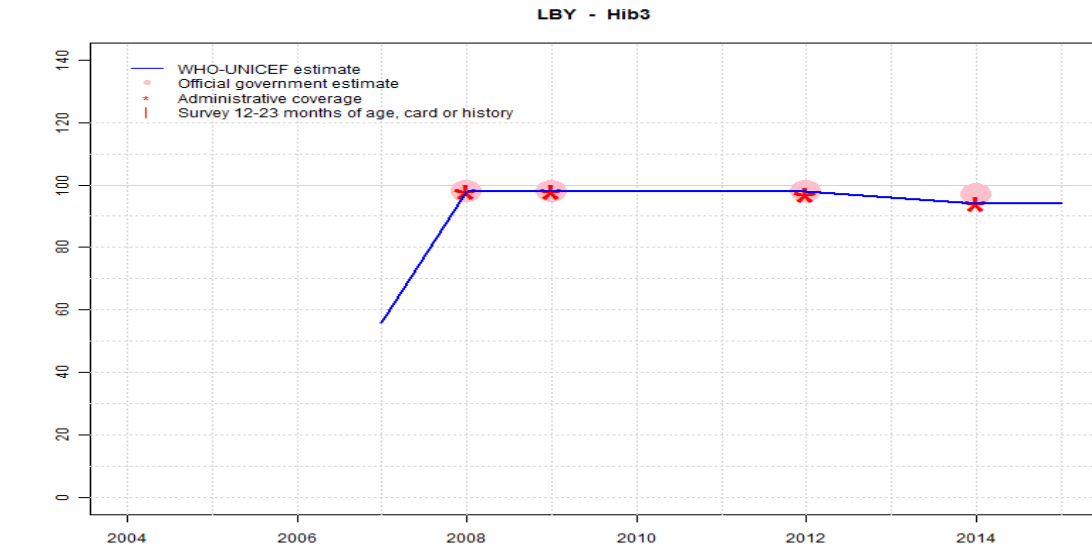
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

Description:

- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on interpolation between data reported by national government. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2014: Estimate based on reported administrative data. Declines in reported coverage are unexplained given increases in the reported number of children vaccinated. Reported coverage levels may carry a risk of overestimation given the use of the number of children vaccinated with BCG as the target population and civil unrest in the country. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-
- 2015: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	56	98	98	98	98	98	96	94	94
Estimate GoC	NA	NA	NA	••	•	•	•	•	•	•	•	•
Official	NA	NA	NA	NA	98	98	NA	NA	98	NA	97	NA
Administrative	NA	NA	NA	NA	98	98	NA	NA	97	NA	94	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.

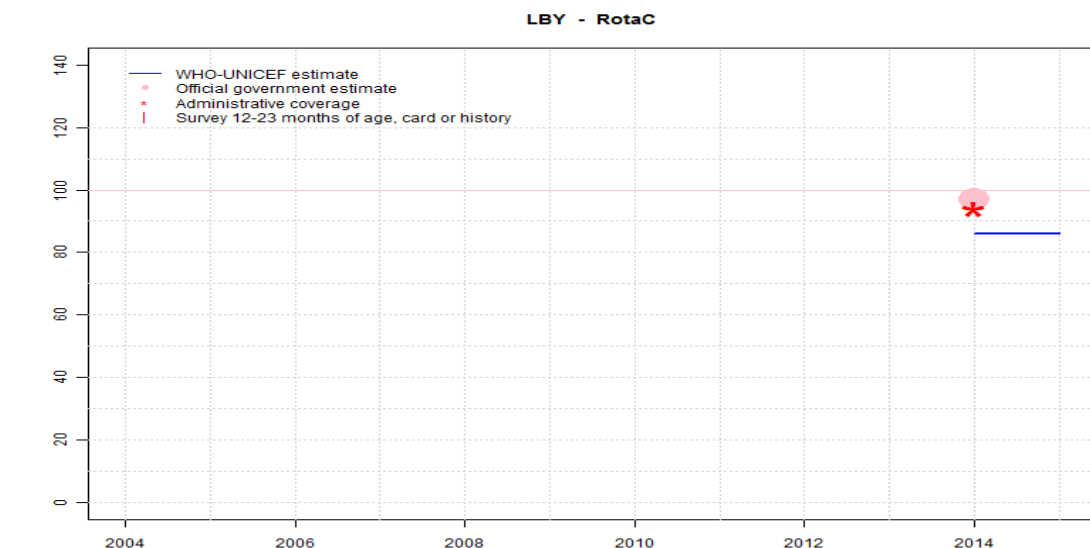
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

Description:

- 2007: Hib vaccine introduced in 2007. 94 percent coverage was achieved in 60 percent of the country. Hib vaccine introduced in 2007 Vaccine presentation is DTP-HepB-Hib. GoC=D+
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on interpolation between reported values. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2011: Estimate based on interpolation between reported values. No empirical data available. Estimate is based on interpolation and actual coverage levels were likely lower during the time of civil strife. GoC=No accepted empirical data
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2014: Estimate based on reported administrative estimate. Declines in reported coverage are unexplained given increases in the reported number of children vaccinated. Reported coverage levels may carry a risk of overestimation given the use of the number of children vaccinated with BCG as the target population and civil unrest in the country. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-
- 2015: Estimate based on extrapolation from data reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - RotaC



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	86	86
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	97	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	94	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.

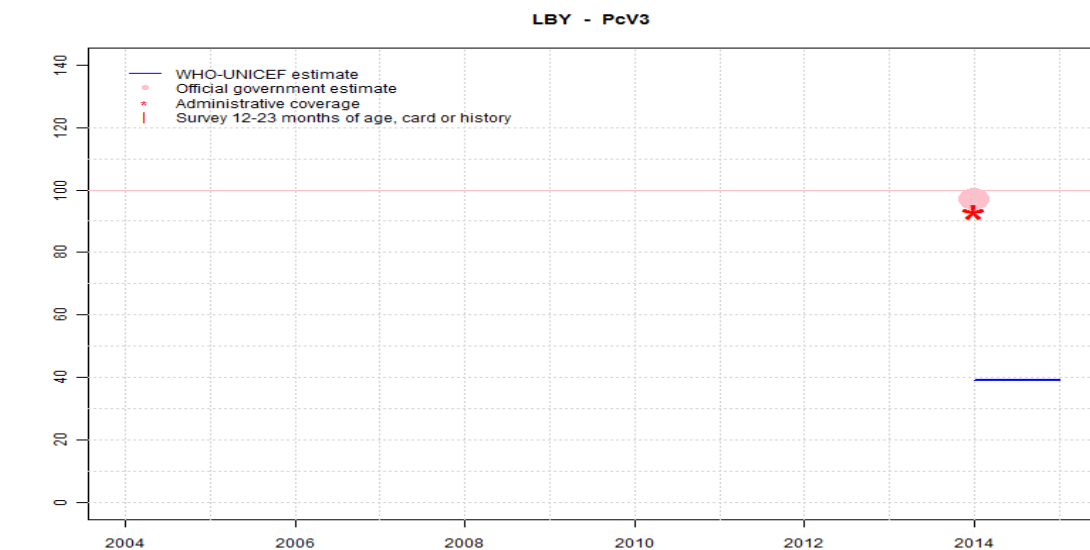
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

Description:

- 2014: Rotavirus vaccine introduced during 2013 and reporting started in 2014. Programme reports 97 percent coverage in 92 percent of the target population. Estimate is based on annualized coverage achieved in the national birth cohort. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-R-
- 2015: Reported data calibrated to 2014 levels. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - PcV3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	39	39
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	97	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	93	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.

Description:

- 2014: Pneumococcal conjugate vaccine introduced during 2013 and reporting started in 2014. Programme reports 97 percent coverage in 42 percent of the target population. Estimate is based on coverage achieved in the national target population. Programme does not provide an explanation for adjustment of government official coverage from administrative reported data. Estimate challenged by: D-R-
- 2015: Reported data calibrated to 2014 levels. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=No accepted empirical data

Libya - survey details

2006 Libyan Arab Republic 2007 Family Health Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	100	12-23 m	11920	81
DTP1	Card or History	100	12-23 m	11920	81

DTP3	Card or History	98	12-23 m	11920	81
MCV1	Card or History	94	12-23 m	11920	81
Pol1	Card or History	100	12-23 m	11920	81
Pol3	Card or History	98	12-23 m	11920	81

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