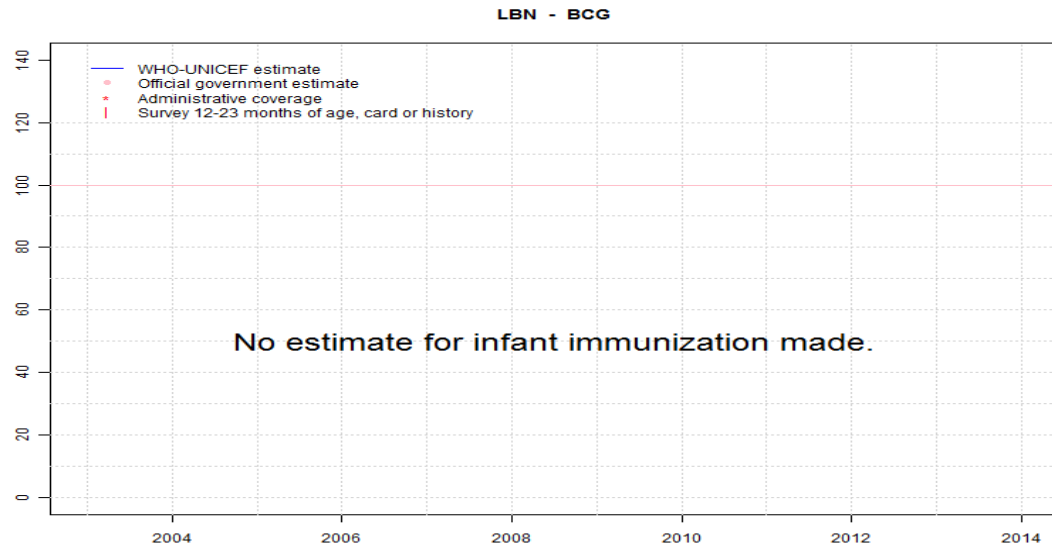


Lebanon - BCG



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

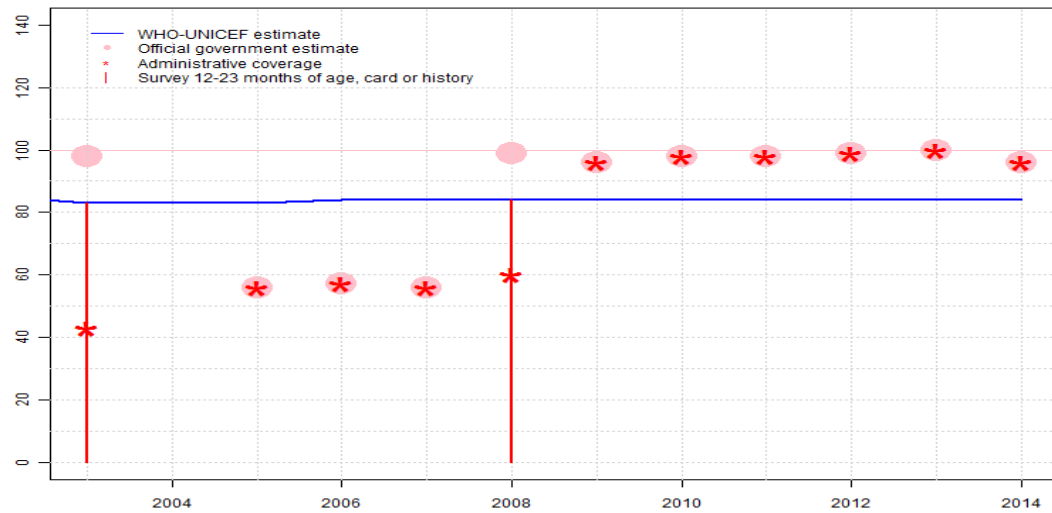
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Lebanon - DTP1

LBN - DTP1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	83	83	83	84	84	84	84	84	84	84	84	84
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	98	NA	56	57	56	99	96	98	98	99	100	96
Administrative	43	NA	56	57	56	60	96	98	98	99	100	96
Survey	83	NA	NA	NA	NA	84	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2003: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 83 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2004: Reported data calibrated to 2003 and 2008 levels. Estimate challenged by: D-
- 2005: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2006: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2007: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Pentavalent DTP-HepB-Hib vaccine introduced in 2007. Estimate challenged by: D-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 84 percent based on 1 survey(s). Reported data excluded. Reported data not consistent with survey results. Administrative data is based on immunizations provided in the public sector. The government estimate includes immunizations delivered in both the public and private sector. Estimate challenged by: D-R-
- 2009: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Administrative data and government estimate includes both data reported by the public sector as well as for immunizations delivered in the private sector. The private sector provides immunization services for between 5 percent to 80 percent of all immunization services. Estimate challenged by: D-
- 2010: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2011: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. Beginning in the middle of 2013, there was an influx of displaced populations from Syria into Lebanon potentially impacting coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. A 2013 national EPI coverage survey suggests lower coverage levels among

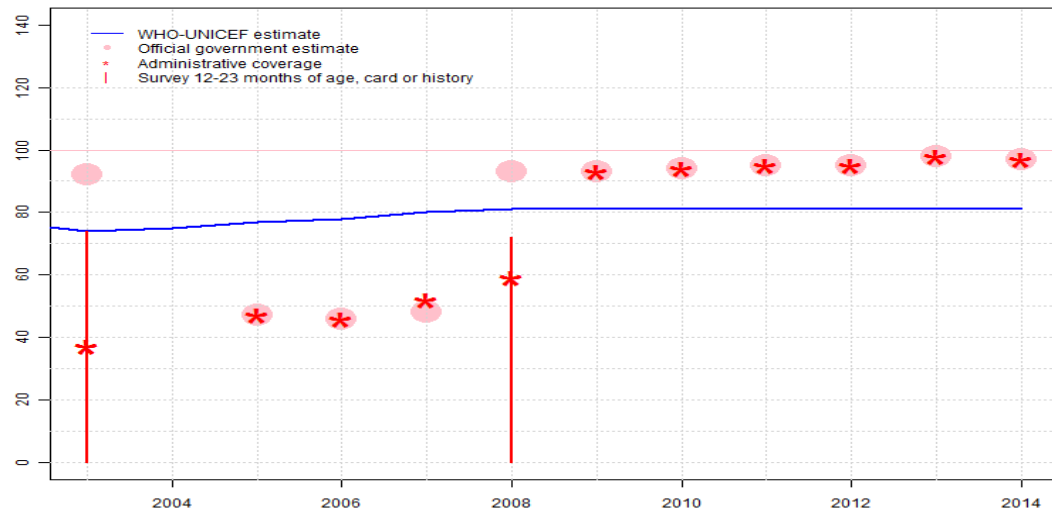
Lebanon - DTP1

Syrian subpopulations living in Lebanon, particularly those who recently entered the country. Estimate challenged by: D-

2014: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. The influx of Syrian subpopulations into Lebanon during 2014 continued to increase potentially impacting reported coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. Beginning in 2015 a stream of work has begun to further understand recent patterns in coverage across recommended vaccines in Lebanon, including a review of administrative recording and reporting systems as well as immunization coverage among displaced populations. Estimate challenged by: D-

Lebanon - DTP3

LBN - DTP3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	74	75	77	78	80	81	81	81	81	81	81	81
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	92	NA	47	46	48	93	93	94	95	95	98	97
Administrative	37	NA	47	46	52	59	93	94	95	95	98	97
Survey	74	NA	NA	NA	NA	72	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2003: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 74 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2004: Reported data calibrated to 2003 and 2008 levels. Estimate challenged by: D-
- 2005: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2006: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2007: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Pentavalent DTP-HepB-Hib vaccine introduced in 2007. Estimate challenged by: D-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 81 percent based on 1 survey(s). Lebanon Multiple Indicator Cluster Survey 2009 card or history results of 72 percent modified for recall bias to 81 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 51 percent and 3d dose card only coverage of 49 percent. Reported data excluded. Reported data not consistent with survey results. Administrative data is based on immunizations provided in the public sector. The government estimate includes immunizations delivered in both the public and private sector. Estimate challenged by: D-R-
- 2009: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Administrative data and government estimate includes both data reported by the public sector as well as for immunizations delivered in the private sector. The private sector provides immunization services for between 5 percent to 80 percent of all immunization services. Estimate challenged by: D-
- 2010: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2011: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. A national EPI coverage was conducted during 2013 among children aged 12-59 months and suggests that 90 percent of children received three doses of DTP containing vaccine by the 5th birthday. Coverage among children aged less than 12 months will be slightly lower. Estimate challenged by: D-
- 2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported

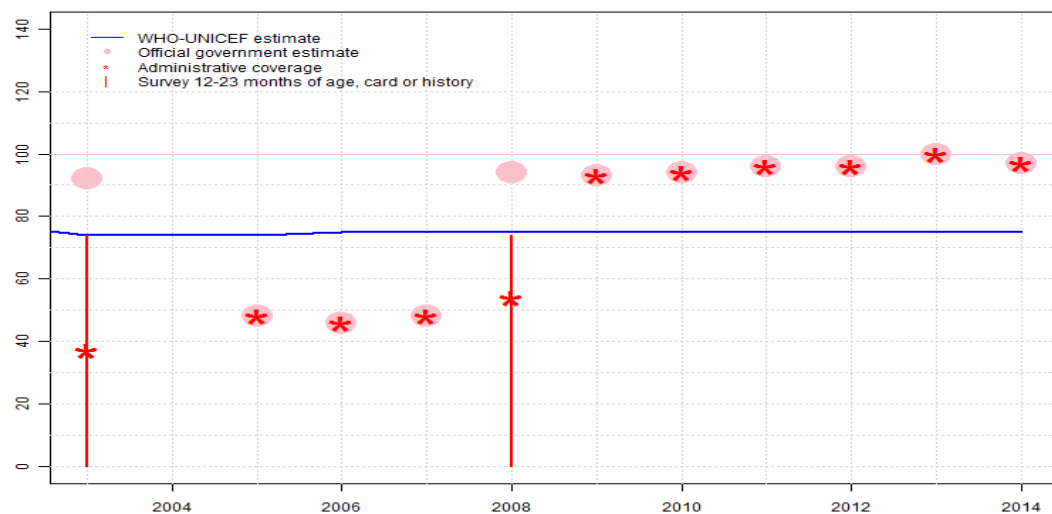
Lebanon - DTP3

data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. Beginning in the middle of 2013, there was an influx of displaced populations from Syria into Lebanon potentially impacting coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. A 2013 national EPI coverage survey suggests lower coverage levels among Syrian subpopulations living in Lebanon, particularly those who recently entered the country. Estimate challenged by: D-

2014: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. The influx of Syrian subpopulations into Lebanon during 2014 continued to increase potentially impacting reported coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. Beginning in 2015 a stream of work has begun to further understand recent patterns in coverage across recommended vaccines in Lebanon, including a review of administrative recording and reporting systems as well as immunization coverage among displaced populations. Estimate challenged by: D-

Lebanon - Pol3

LBN - Pol3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	74	74	74	75	75	75	75	75	75	75	75	75
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	92	NA	48	46	48	94	93	94	96	96	100	97
Administrative	37	NA	48	46	48	54	93	94	96	96	100	97
Survey	74	NA	NA	NA	NA	74	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

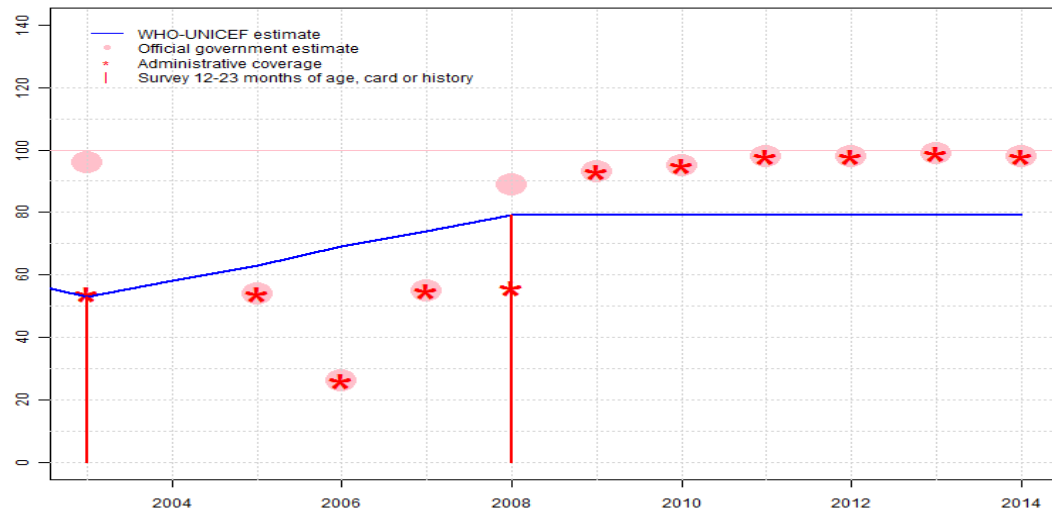
- 2003: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 74 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2004: Reported data calibrated to 2003 and 2008 levels. Estimate challenged by: D-
- 2005: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2006: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2007: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 75 percent based on 1 survey(s). Lebanon Multiple Indicator Cluster Survey 2009 card or history results of 74 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 86 percent, 1st dose card only coverage of 53 percent and 3d dose card only coverage of 46 percent. Reported data excluded. Reported data not consistent with survey results. Administrative data is based on immunizations provided in the public sector. The government estimate includes immunizations delivered in both the public and private sector. Estimate challenged by: D-R-
- 2009: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Administrative data and government estimate includes both data reported by the public sector as well as for immunizations delivered in the private sector. The private sector provides immunization services for between 5 percent to 80 percent of all immunization services. Estimate challenged by: D-
- 2010: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2011: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. Beginning in the middle of 2013, there was an influx of displaced populations from Syria into Lebanon potentially impacting

coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. A 2013 national EPI coverage survey suggests lower coverage levels among Syrian subpopulations living in Lebanon, particularly those who recently entered the country. Estimate challenged by: D-

2014: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. The influx of Syrian subpopulations into Lebanon during 2014 continued to increase potentially impacting reported coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. Beginning in 2015 a stream of work has begun to further understand recent patterns in coverage across recommended vaccines in Lebanon, including a review of administrative recording and reporting systems as well as immunization coverage among displaced populations. Estimate challenged by: D-

Lebanon - MCV1

LBN - MCV1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	53	58	63	69	74	79	79	79	79	79	79	79
Estimate GoC	•	•	••	••	••	•	•	•	•	•	•	•
Official	96	NA	54	26	55	89	93	95	98	98	99	98
Administrative	54	NA	54	26	55	56	93	95	98	98	99	98
Survey	53	NA	NA	NA	NA	79	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2003: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 53 percent based on 1 survey(s). Estimate challenged by: R-
- 2004: Reported data calibrated to 2003 and 2008 levels. Estimate challenged by: D-
- 2005: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. GoC=S+ D+
- 2006: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Reported data excluded. Decline in reported coverage from 54 percent to 26 percent with increase to 55 percent. GoC=S+
- 2007: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. GoC=S+ D+
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 79 percent based on 1 survey(s). Reported data excluded. Reported data not consistent with survey results. Administrative data is based on immunizations provided in the public sector. The government estimate includes immunizations delivered in both the public and private sector. Estimate challenged by: D-R-
- 2009: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Administrative data and government estimate includes both data reported by the public sector as well as for immunizations delivered in the private sector. The private sector provides immunization services for between 5 percent to 80 percent of all immunization services. Estimate challenged by: D-
- 2010: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2011: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. Beginning in the middle of 2013, there was an influx of displaced populations from Syria into Lebanon potentially impacting coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. A 2013 national EPI coverage survey suggests lower coverage levels among Syrian subpopulations living in Lebanon, particularly those who recently

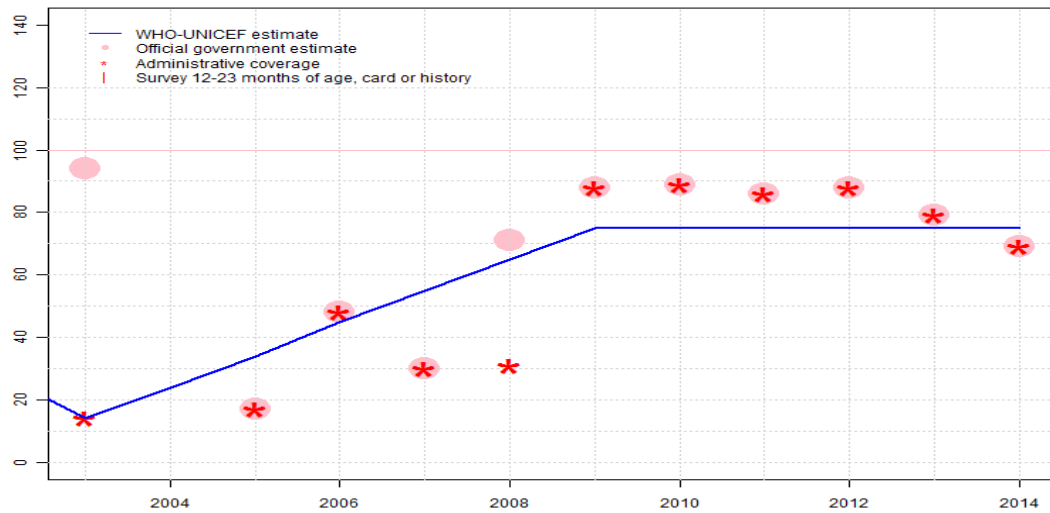
Lebanon - MCV1

entered the country. Estimate challenged by: D-

2014: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. The influx of Syrian subpopulations into Lebanon during 2014 continued to increase potentially impacting reported coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. Beginning in 2015 a stream of work has begun to further understand recent patterns in coverage across recommended vaccines in Lebanon, including a review of administrative recording and reporting systems as well as immunization coverage among displaced populations. Estimate challenged by: D-

Lebanon - MCV2

LBN - MCV2



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	14	24	34	45	55	65	75	75	75	75	75	75
Estimate GoC	●	●●	●	●	●	●	●	●	●	●	●●	●●
Official	94	NA	17	48	30	71	88	89	86	88	79	69
Administrative	14	NA	17	48	30	31	88	89	86	88	79	69
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

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

2003: Measles second dose is adjusted from reported MCV first dose coverage levels. Estimate challenged by: R-

2004: Reported data calibrated to 2003 and 2009 levels. GoC=D+

2005: Reported data calibrated to 2003 and 2009 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-

2006: Reported data calibrated to 2003 and 2009 levels. Reported data excluded. Reported data not consistent with survey results. Reported data excluded. Unexplained increase from 17 percent to 48 percent with decrease 30 percent. Estimate challenged by: D-

2007: Reported data calibrated to 2003 and 2009 levels. Reported data excluded. Reported data not consistent with survey results. Reported data excluded. Decline in reported coverage from 48 percent to 30 percent with increase to 71 percent. Estimate challenged by: D-

2008: Reported data calibrated to 2003 and 2009 levels. Reported data excluded. Reported data not consistent with survey results. Administrative data is based on immunizations provided in the public sector. The government estimate includes immunizations delivered in both the public and private sector. Estimate challenged by: D-

2009: Measles second dose is adjusted from reported MCV first dose coverage levels. Reported data excluded. Reported data not consistent with survey results. Administrative data and government estimate includes both data reported by the public sector as well as for immunizations delivered in the private sector. The private sector provides immunization services for between 5 percent to 80 percent of all immunization services. Estimate challenged by: D-R-

2010: Reported data calibrated to 2009 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-

2011: Reported data calibrated to 2009 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-

2012: Reported data calibrated to 2009 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-

2013: Reported data calibrated to 2009 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. Beginning in the middle of 2013, there was an influx of displaced populations from Syria into Lebanon potentially impacting coverage levels in the country. In spite of reports from UNHCR, reported

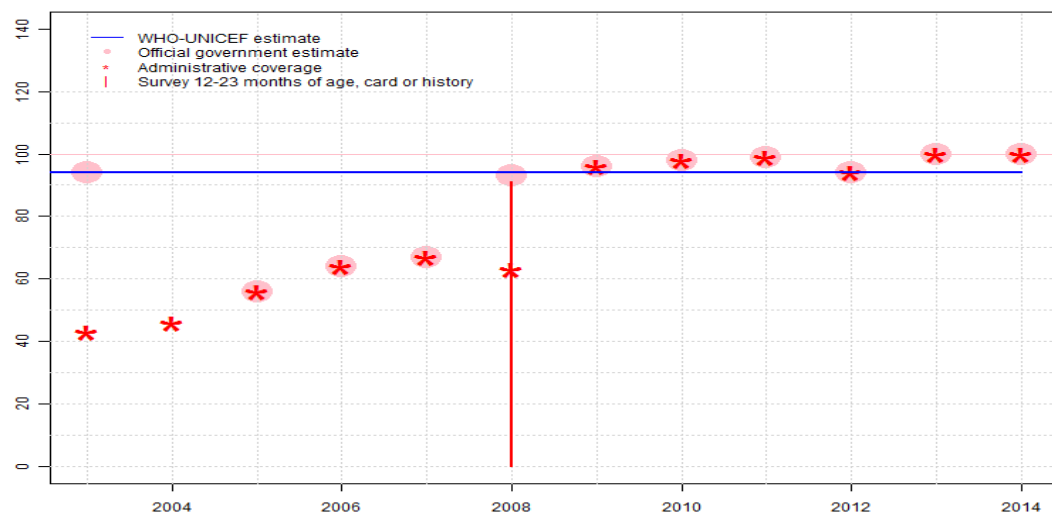
Lebanon - MCV2

target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. A 2013 national EPI coverage survey suggests lower coverage levels among Syrian subpopulations living in Lebanon, particularly those who recently entered the country. GoC=D+

2014: Reported data calibrated to 2009 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. The influx of Syrian subpopulations into Lebanon during 2014 continued to increase potentially impacting reported coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. Beginning in 2015 a stream of work has begun to further understand recent patterns in coverage across recommended vaccines in Lebanon, including a review of administrative recording and reporting systems as well as immunization coverage among displaced populations. GoC=D+

Lebanon - HepBB

LBN - HepBB



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	94	94	94	94	94	94	94	94	94	94	94	94
Estimate GoC	•	•	•	•	•	•	•	•	•	••	•	•
Official	94	NA	56	64	67	93	96	98	99	94	100	100
Administrative	43	46	56	64	67	63	96	98	99	94	100	100
Survey	NA	NA	NA	NA	NA	91	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

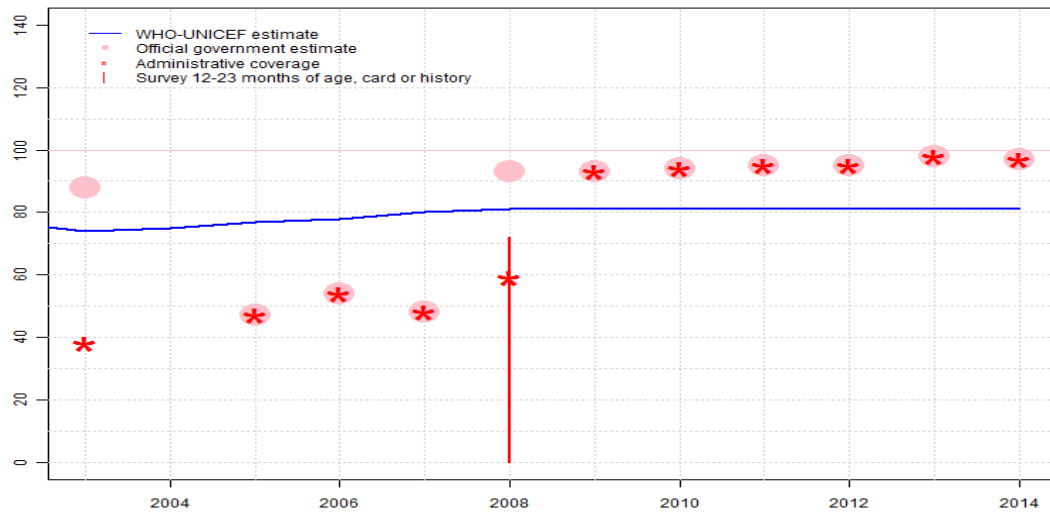
- 2003: Estimate based on reported data. Estimate challenged by: D-
- 2004: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2005: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2006: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2007: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2008: Estimate based on extrapolation from data reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Reported data excluded. Reported data not consistent with survey results. Administrative data is based on immunizations provided in the public sector. The government estimate includes immunizations delivered in both the public and private sector. Estimate challenged by: D-
- 2009: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results. Administrative data and government estimate includes both data reported by the public sector as well as for immunizations delivered in the private sector. The private sector provides immunization services for between 5 percent to 80 percent of all immunization services. Estimate challenged by: D-
- 2010: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2011: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results. GoC=R+ D+
- 2013: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. Beginning in the middle of 2013, there was an influx of displaced populations from Syria into Lebanon potentially impacting coverage levels in the country. In

spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. A 2013 national EPI coverage survey suggests lower coverage levels among Syrian subpopulations living in Lebanon, particularly those who recently entered the country. Estimate challenged by: D-

2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. The influx of Syrian subpopulations into Lebanon during 2014 continued to increase potentially impacting reported coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. Beginning in 2015 a stream of work has begun to further understand recent patterns in coverage across recommended vaccines in Lebanon, including a review of administrative recording and reporting systems as well as immunization coverage among displaced populations. Estimate challenged by: D-

Lebanon - HepB3

LBN - HepB3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	74	75	77	78	80	81	81	81	81	81	81	81
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	88	NA	47	54	48	93	93	94	95	95	98	97
Administrative	38	NA	47	54	48	59	93	94	95	95	98	97
Survey	NA	NA	NA	NA	NA	72	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2003: Estimate based on DTP3 coverage estimates. Estimate challenged by: D-R-
- 2004: Reported data calibrated to 2003 and 2008 levels. Estimate challenged by: D-
- 2005: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2006: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2007: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Pentavalent DTP-HepB-Hib vaccine introduced in 2007. Estimate challenged by: D-
- 2008: Estimate based on DTP3 coverage estimates. Lebanon Multiple Indicator Cluster Survey 2009 card or history results of 72 percent modified for recall bias to 81 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 51 percent and 3d dose card only coverage of 49 percent. Reported data excluded. Reported data not consistent with survey results. Administrative data is based on immunizations provided in the public sector. The government estimate includes immunizations delivered in both the public and private sector. Estimate challenged by: D-R-
- 2009: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Administrative data and government estimate includes both data reported by the public sector as well as for immunizations delivered in the private sector. The private sector provides immunization services for between 5 percent to 80 percent of all immunization services. Estimate challenged by: D-
- 2010: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2011: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. Beginning in the middle of 2013, there was an influx of displaced populations from Syria into Lebanon potentially impacting coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth.

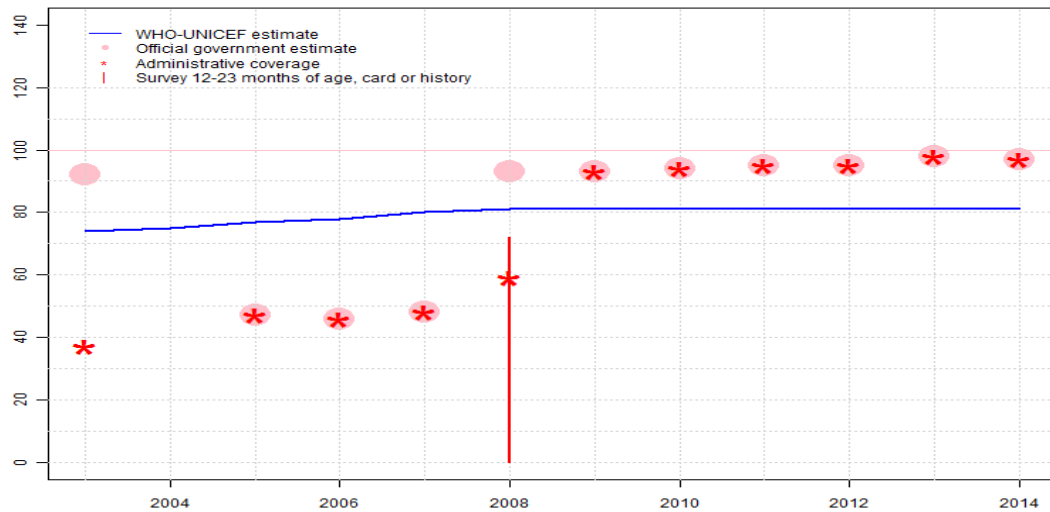
Lebanon - HepB3

A 2013 national EPI coverage survey suggests lower coverage levels among Syrian subpopulations living in Lebanon, particularly those who recently entered the country. Estimate challenged by: D-

2014: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. The influx of Syrian subpopulations into Lebanon during 2014 continued to increase potentially impacting reported coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. Beginning in 2015 a stream of work has begun to further understand recent patterns in coverage across recommended vaccines in Lebanon, including a review of administrative recording and reporting systems as well as immunization coverage among displaced populations. Estimate challenged by: D-

Lebanon - Hib3

LBN - Hib3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	74	75	77	78	80	81	81	81	81	81	81	81
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	92	NA	47	46	48	93	93	94	95	95	98	97
Administrative	37	NA	47	46	48	59	93	94	95	95	98	97
Survey	NA	NA	NA	NA	NA	72	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

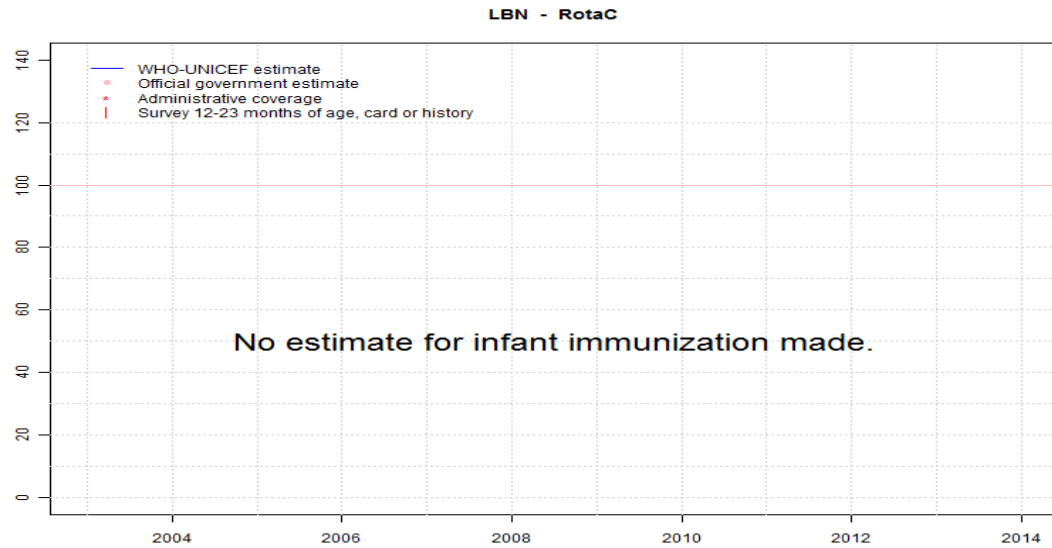
- 2003: Estimate based on DTP3 coverage estimates. Hib vaccine introduced in 2003. Estimate challenged by: D-R-
- 2004: Reported data calibrated to 2003 and 2008 levels. GoC=No accepted empirical data
- 2005: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2006: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2007: Reported data calibrated to 2003 and 2008 levels. Reported data excluded. Reported data not consistent with survey results. Pentavalent DTP-HepB-Hib vaccine introduced in 2007. Estimate challenged by: D-
- 2008: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 81 percent based on 1 survey(s). Lebanon Multiple Indicator Cluster Survey 2009 card or history results of 72 percent modified for recall bias to 81 percent based on 1st dose card or history coverage of 84 percent, 1st dose card only coverage of 51 percent and 3d dose card only coverage of 49 percent. Reported data excluded. Reported data not consistent with survey results. Administrative data is based on immunizations provided in the public sector. The government estimate includes immunizations delivered in both the public and private sector. Estimate challenged by: D-R-
- 2009: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Administrative data and government estimate includes both data reported by the public sector as well as for immunizations delivered in the private sector. The private sector provides immunization services for between 5 percent to 80 percent of all immunization services. Estimate challenged by: D-
- 2010: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2011: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-
- 2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. Beginning in the middle of 2013, there was an influx of displaced populations from Syria into Lebanon potentially impacting coverage levels in the country. In spite of reports from UNHCR, reported

Lebanon - Hib3

target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. A 2013 national EPI coverage survey suggests lower coverage levels among Syrian subpopulations living in Lebanon, particularly those who recently entered the country. Programme reports Hib containing vaccine stockout for 5 months in 26 districts. Estimate challenged by: D-

2014: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results across all vaccines. Survey results not presented in a standard format; activity to address results presentation is on-going. The influx of Syrian subpopulations into Lebanon during 2014 continued to increase potentially impacting reported coverage levels in the country. In spite of reports from UNHCR, reported target population estimates from the national immunization programme do not reflect increases beyond the expected year-to-year population growth. Beginning in 2015 a stream of work has begun to further understand recent patterns in coverage across recommended vaccines in Lebanon, including a review of administrative recording and reporting systems as well as immunization coverage among displaced populations. Estimate challenged by: D-

Lebanon - RotaC



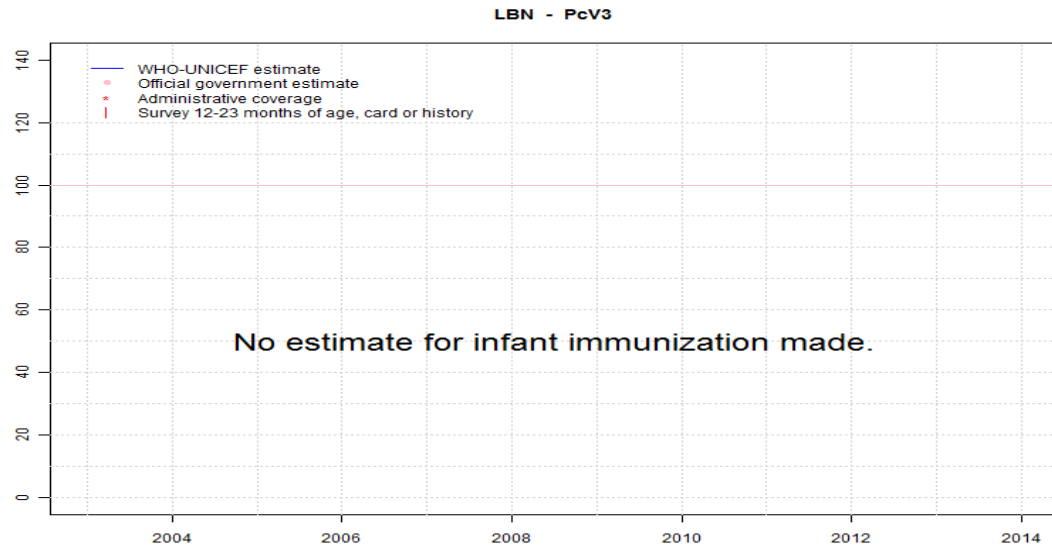
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

Lebanon - PcV3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

Lebanon - survey details

2008 Lebanon Multiple Indicator Cluster Survey 2009

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP1	C or H <12 months	83	12-23 m	626	55
DTP1	Card	51	12-23 m	626	55
DTP1	Card or History	84	12-23 m	626	55
DTP1	History	33	12-23 m	626	55
DTP3	C or H <12 months	71	12-23 m	626	55
DTP3	Card	49	12-23 m	626	55
DTP3	Card or History	72	12-23 m	626	55
DTP3	History	23	12-23 m	626	55
HepB1	C or H <12 months	83	12-23 m	626	55
HepB1	Card	51	12-23 m	626	55
HepB1	Card or History	84	12-23 m	626	55
HepB1	History	33	12-23 m	626	55
HepB3	C or H <12 months	71	12-23 m	626	55
HepB3	Card	49	12-23 m	626	55
HepB3	Card or History	72	12-23 m	626	55
HepB3	History	23	12-23 m	626	55
HepBB	C or H <12 months	91	12-23 m	626	55
HepBB	Card	51	12-23 m	626	55
HepBB	Card or History	91	12-23 m	626	55
HepBB	History	39	12-23 m	626	55
Hib1	C or H <12 months	83	12-23 m	626	55
Hib1	Card	51	12-23 m	626	55
Hib1	Card or History	84	12-23 m	626	55
Hib1	History	33	12-23 m	626	55
Hib3	C or H <12 months	71	12-23 m	626	55
Hib3	Card	49	12-23 m	626	55
Hib3	Card or History	72	12-23 m	626	55
Hib3	History	23	12-23 m	626	55
MCV1	C or H <12 months	71	12-23 m	626	55
MCV1	Card	44	12-23 m	626	55

MCV1	Card or History	79	12-23 m	626	55
MCV1	History	35	12-23 m	626	55
Pol1	C or H <12 months	85	12-23 m	626	55
Pol1	Card	53	12-23 m	626	55
Pol1	Card or History	86	12-23 m	626	55
Pol1	History	33	12-23 m	626	55
Pol3	C or H <12 months	72	12-23 m	626	55
Pol3	Card	46	12-23 m	626	55
Pol3	Card or History	74	12-23 m	626	55
Pol3	History	28	12-23 m	626	55

2003 Lebanon Family Health Survey (PAPFAM) 2004

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP1	Card or History	83	12-23 m	3365	62
DTP3	Card or History	74	12-23 m	3365	62
MCV1	Card or History	53	12-23 m	3365	62
Pol1	Card or History	83	12-23 m	3365	62
Pol3	Card or History	74	12-23 m	3365	62
YFV	Card or History	50	12-23 m	3365	62

1999 Preliminary Report on the Multiple Cluster Survey on the Situation of Children in Lebanon, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP3	Card or History	90	12-23 m	-	59
MCV1	Card or History	88	12-23 m	-	59
Pol3	Card or History	90	12-23 m	-	59

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