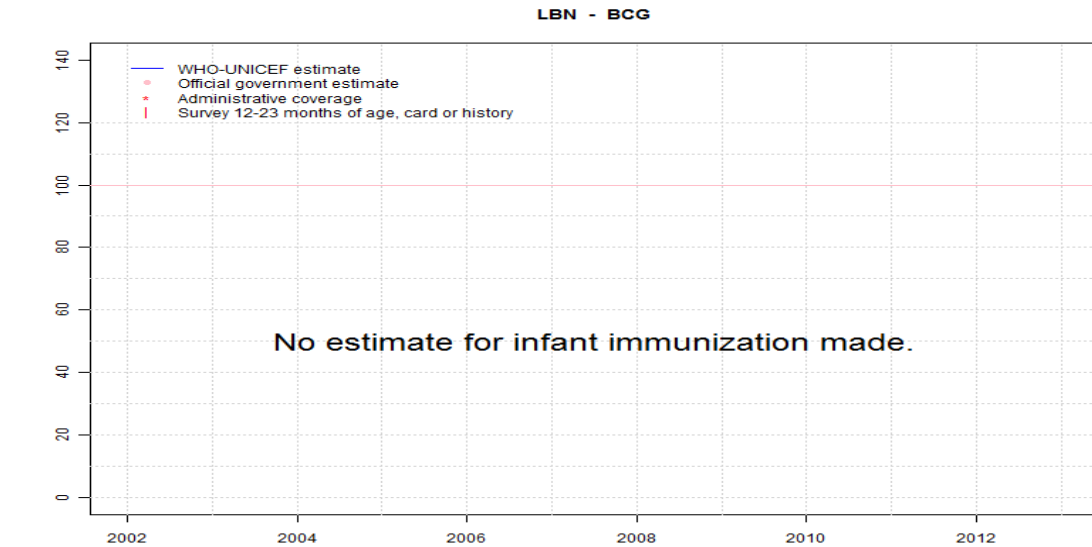


# Lebanon - BCG



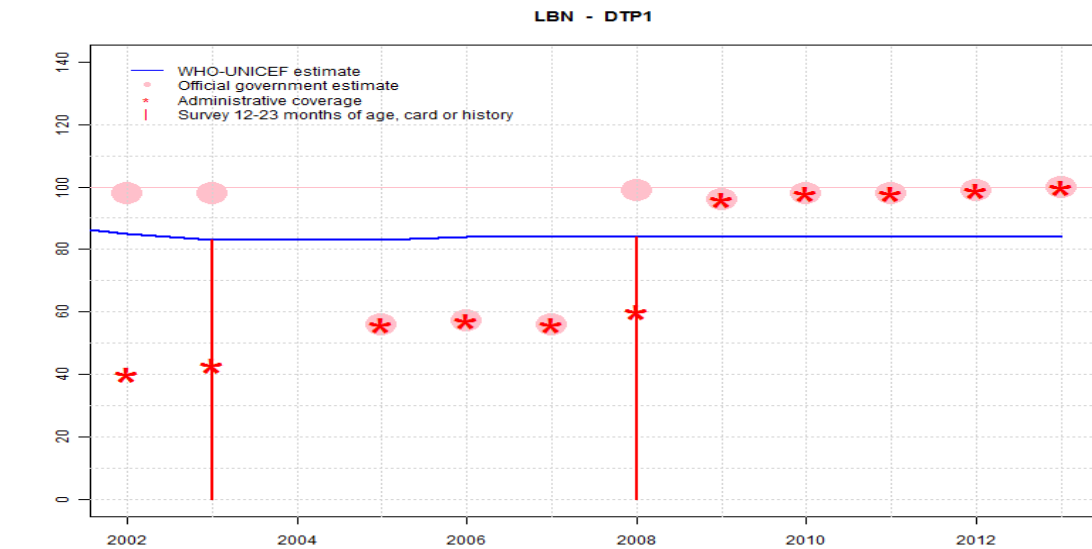
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	85	83	83	83	84	84	84	84	84	84	84	84
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	98	98	NA	56	57	56	99	96	98	98	99	100
Administrative	40	43	NA	56	57	56	60	96	98	98	99	100
Survey	NA	83	NA	NA	NA	NA	84	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.

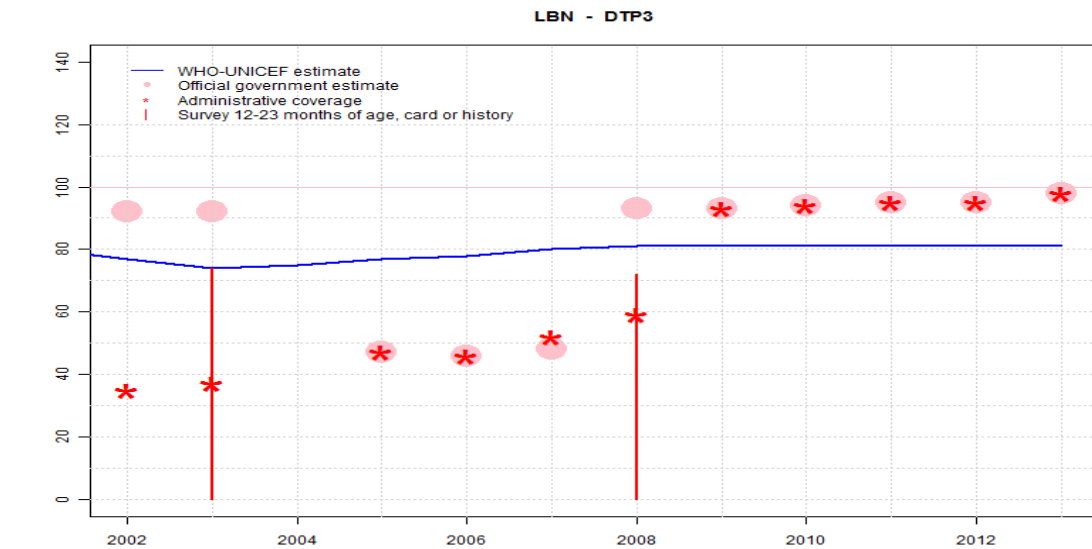
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2002: Estimate based on interpolation between 1997 and 2003 levels. Reported data not consistent with survey results. Estimate challenged by: D-R-
- 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 of 84 percent changed from previous revision value of 83 percent. 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 of 84 percent changed from previous revision value of 83 percent. 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. Estimate challenged by: D-

# Lebanon - DTP3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	77	74	75	77	78	80	81	81	81	81	81	81
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	92	92	NA	47	46	48	93	93	94	95	95	98
Administrative	35	37	NA	47	46	52	59	93	94	95	95	98
Survey	NA	74	NA	NA	NA	NA	72	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:

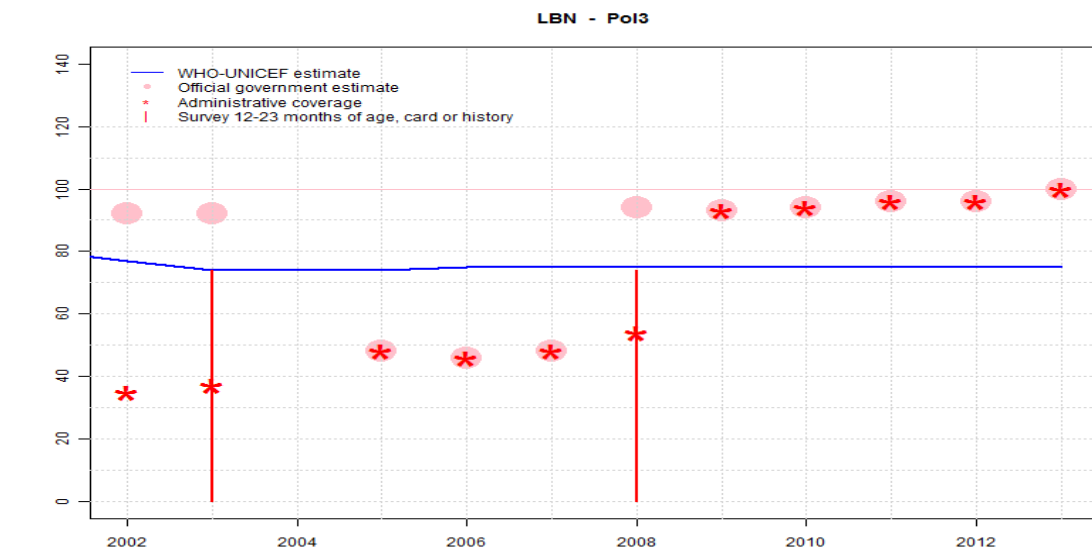
- 2002: Estimate based on interpolation between 1997 and 2003 levels. Reported data not consistent with survey results. Estimate challenged by: D-R-
- 2003: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 74 percent based on 1 survey(s). Estimate challenged 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 of 80 percent changed from previous revision value of 79 percent. 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 of 81 percent changed from previous revision value of 82 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 81 percent changed from previous revision value of 82 percent. Estimate challenged by: D-

# Lebanon - DTP3

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2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-

# Lebanon - Pol3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	77	74	74	74	75	75	75	75	75	75	75	75
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	92	92	NA	48	46	48	94	93	94	96	96	100
Administrative	35	37	NA	48	46	48	54	93	94	96	96	100
Survey	NA	74	NA	NA	NA	NA	74	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:

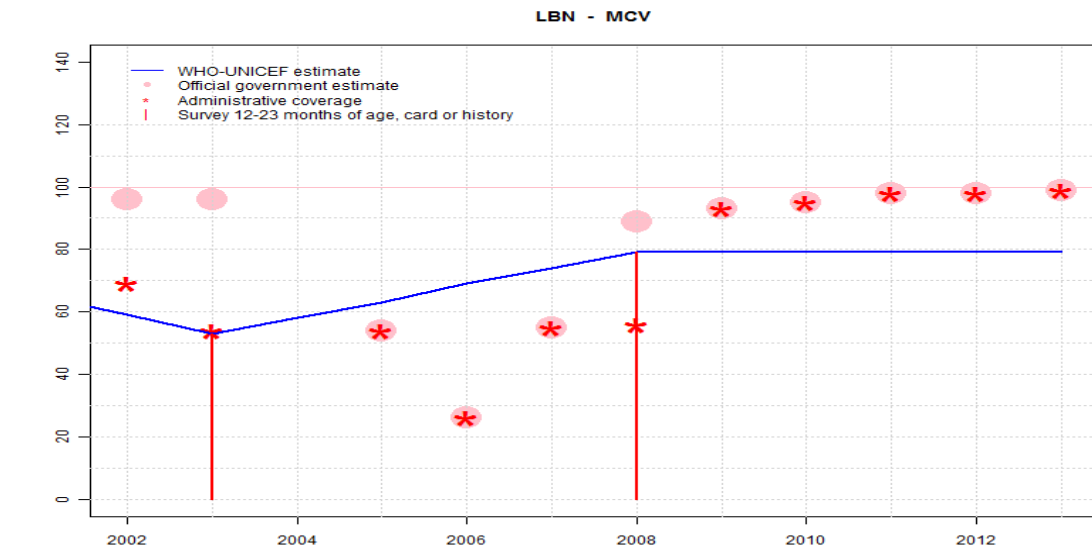
- 2002: Estimate based on interpolation between 1997 and 2003 levels. Reported data not consistent with survey results. Estimate challenged by: D-R-
- 2003: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 74 percent based on 1 survey(s). Estimate challenged 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 of 75 percent changed from previous revision value of 76 percent. Estimate challenged by: D-
- 2010: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 75 percent changed from previous revision value of 76 percent. Estimate challenged by: D-
- 2011: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 75 percent changed from previous revision value of 77 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 75 percent changed

# Lebanon - Pol3

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from previous revision value of 77 percent. Estimate challenged by: D-  
2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported  
data not consistent with survey results. Estimate challenged by: D-

# Lebanon - MCV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	59	53	58	63	69	74	79	79	79	79	79	79
Estimate GoC	•	•	•	••	••	••	•	•	•	•	•	•
Official	96	96	NA	54	26	55	89	93	95	98	98	99
Administrative	69	54	NA	54	26	55	56	93	95	98	98	99
Survey	NA	53	NA	NA	NA	NA	79	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.

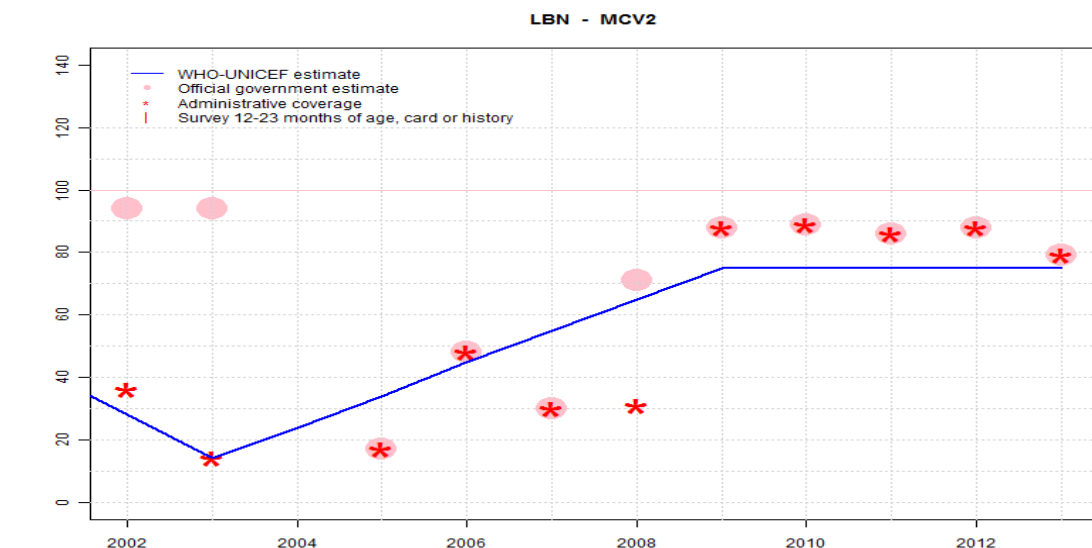
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2002: Estimate based on interpolation between 1997 and 2003 levels. Reported data not consistent with survey results. Estimate challenged by: D-R-
- 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 of 79 percent changed from previous revision value of 80 percent. Estimate challenged by: D-
- 2011: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 79 percent changed from previous revision value of 80 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 79 percent changed from previous revision value of 80 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-



# Lebanon - MCV2



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	28	14	24	34	45	55	65	75	75	75	75	75
Estimate GoC	•	•	••	•	•	•	•	•	•	•	•	••
Official	94	94	NA	17	48	30	71	88	89	86	88	79
Administrative	36	14	NA	17	48	30	31	88	89	86	88	79
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 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.

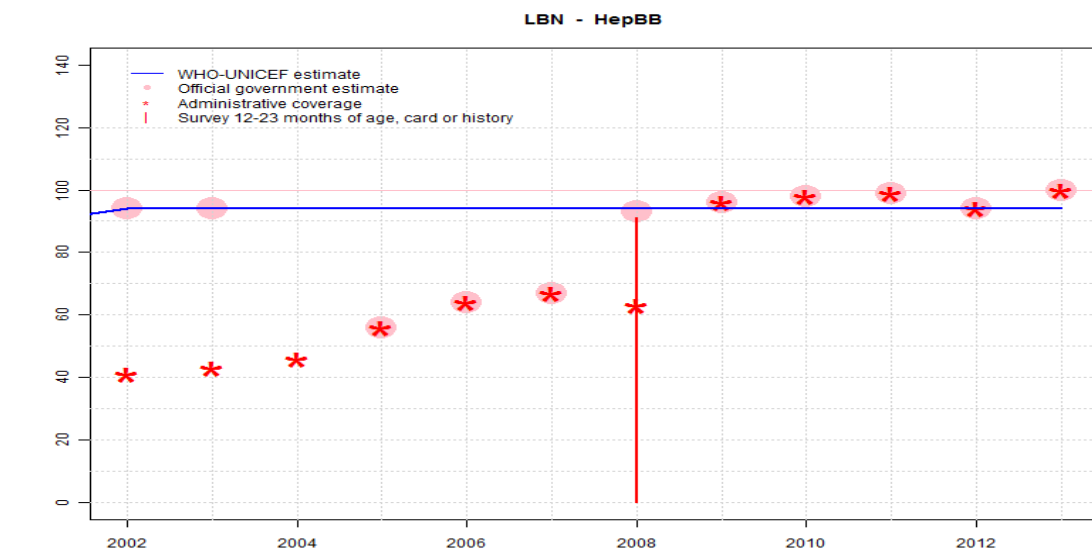
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

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

- 2002: Estimate based on interpolation between 1999 and 2003 levels. Reported data not consistent with survey results. Estimate challenged by: D-R-
- 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. GoC=D+

# Lebanon - HepBB



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	94	94	94	94	94	94	94	94	94	94	94	94
Estimate GoC	•	•	•	•	•	•	•	•	•	•	••	•
Official	94	94	NA	56	64	67	93	96	98	99	94	100
Administrative	41	43	46	56	64	67	63	96	98	99	94	100
Survey	NA	NA	NA	NA	NA	NA	91	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.

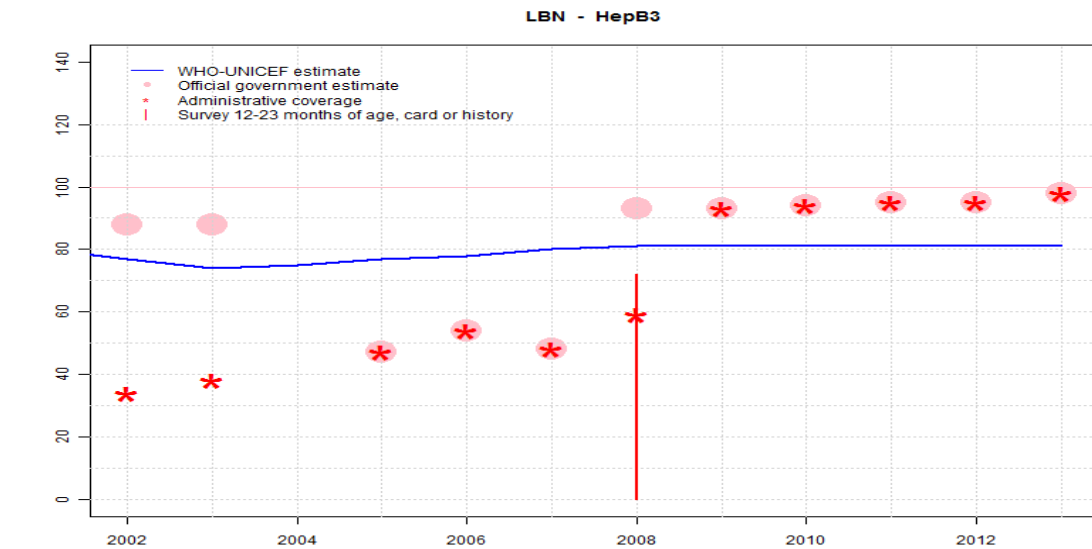
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2002: Estimate based on reported data. Estimate challenged by: D-
- 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. Estimate challenged by: D-

# Lebanon - HepB3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	77	74	75	77	78	80	81	81	81	81	81	81
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	88	88	NA	47	54	48	93	93	94	95	95	98
Administrative	34	38	NA	47	54	48	59	93	94	95	95	98
Survey	NA	NA	NA	NA	NA	NA	72	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.

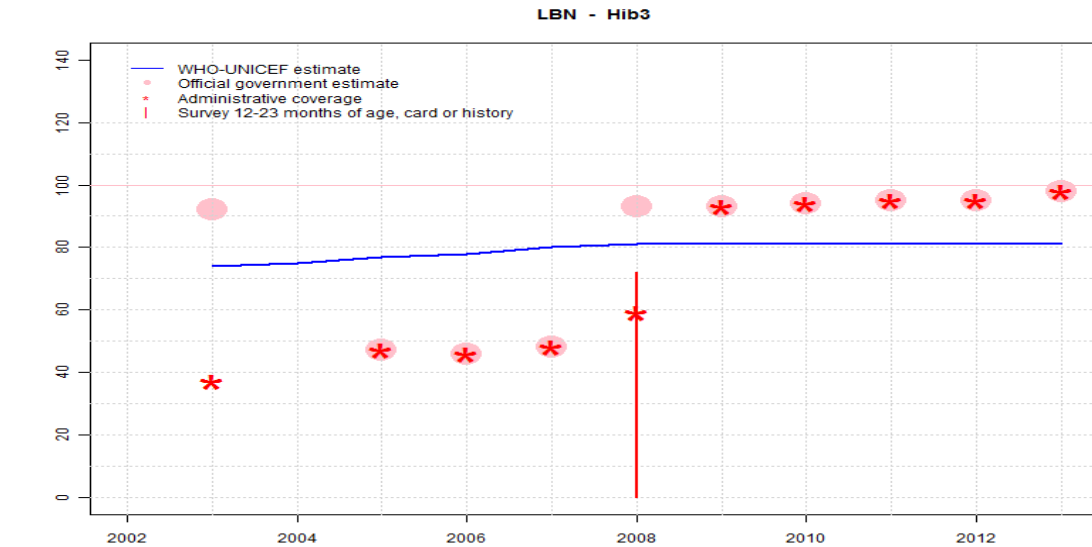
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2002: Estimate based on DTP3 coverage estimates. Estimate challenged by: D-R-
- 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 of 81 percent changed from previous revision value of 82 percent. Estimate challenged by: D-
- 2010: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 81 percent changed from previous revision value of 82 percent. Estimate challenged by: D-
- 2011: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 81 percent changed from previous revision value of 83 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 81 percent changed from previous revision value of 84 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate challenged by: D-

# Lebanon - Hib3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	74	75	77	78	80	81	81	81	81	81	81
Estimate GoC	NA	•	•	•	•	•	•	•	•	•	•	•
Official	NA	92	NA	47	46	48	93	93	94	95	95	98
Administrative	NA	37	NA	47	46	48	59	93	94	95	95	98
Survey	NA	NA	NA	NA	NA	NA	72	NA	NA	NA	NA	NA

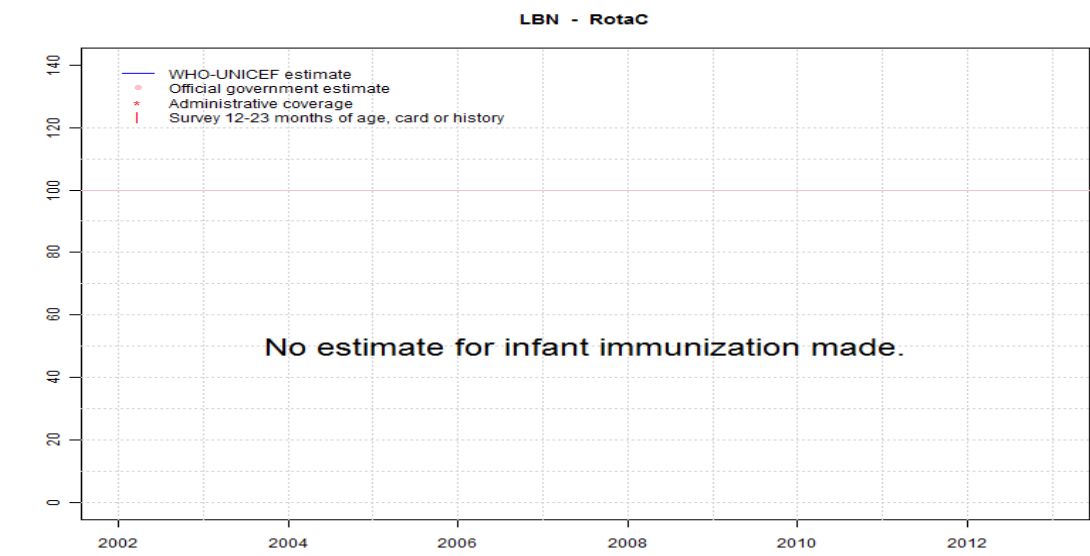
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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 of 80 percent changed from previous revision value of 79 percent. 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 of 81 percent changed from previous revision value of 82 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Estimate of 81 percent changed from previous revision value of 82 percent. Estimate challenged by: D-
- 2013: Reported data calibrated to 2008 levels. Reported data excluded. Reported data not consistent with survey results. Programme reports Hib containing vaccine stockout for 5 months in 26 districts. Estimate challenged by: D-



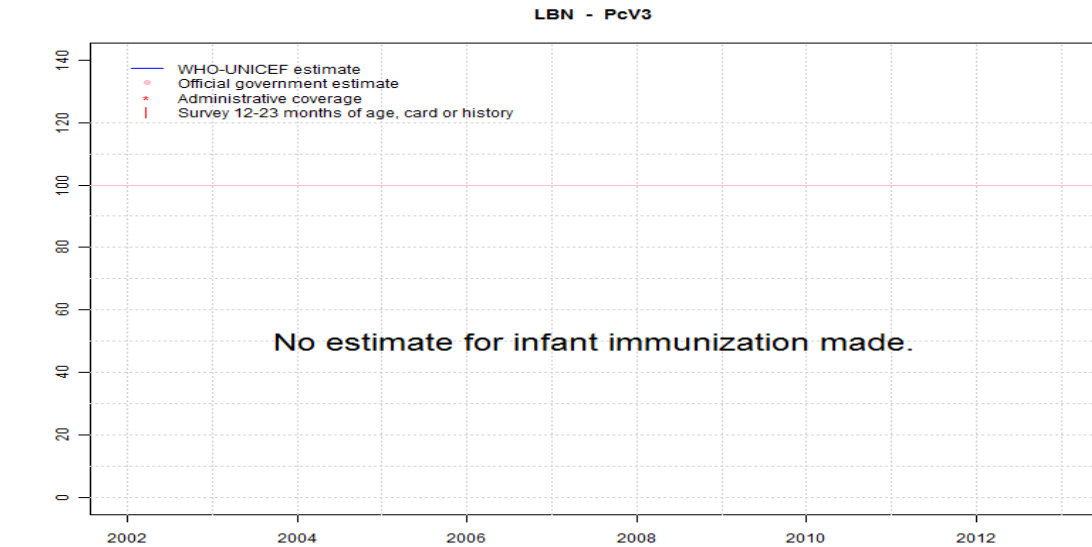
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
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
MCV	C or H <12 months	71	12-23 m	626	55
MCV	Card	44	12-23 m	626	55

MCV	Card or History	79	12-23 m	626	55
MCV	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
MCV	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
MCV	Card or History	88	12-23 m	-	59
Pol3	Card or History	90	12-23 m	-	59

Further information and estimates prior to 2002 are available at:

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

[http://www.who.int/immunization/monitoring\\_surveillance/routine/coverage/en/index4.html](http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html)