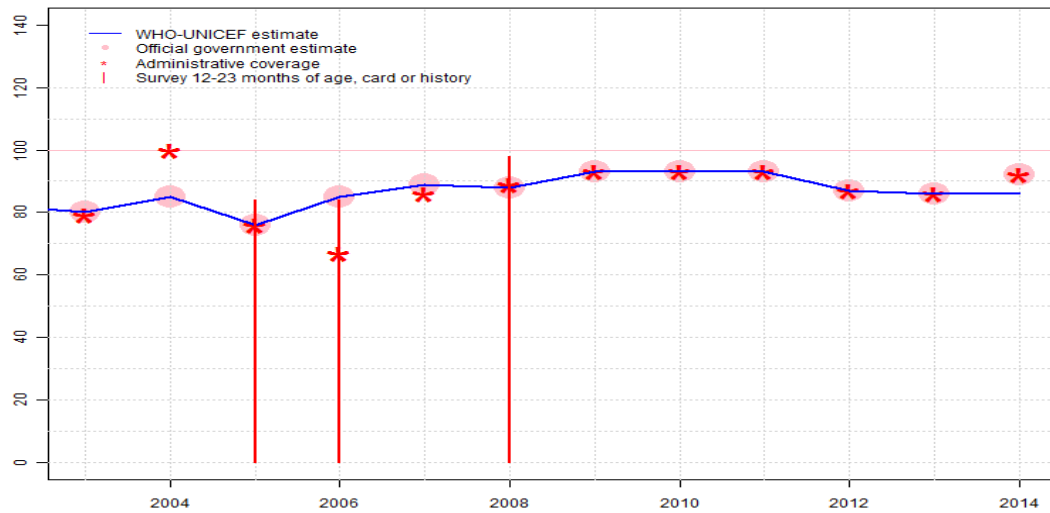


Myanmar - BCG

MMR - BCG



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	80	85	76	85	89	88	93	93	93	87	86	86
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	80	85	76	85	89	88	93	93	93	87	86	92
Administrative	79	100	76	67	86	89	93	93	93	87	86	92
Survey	NA	NA	84	84	NA	98	NA	NA	NA	NA	NA	NA

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

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

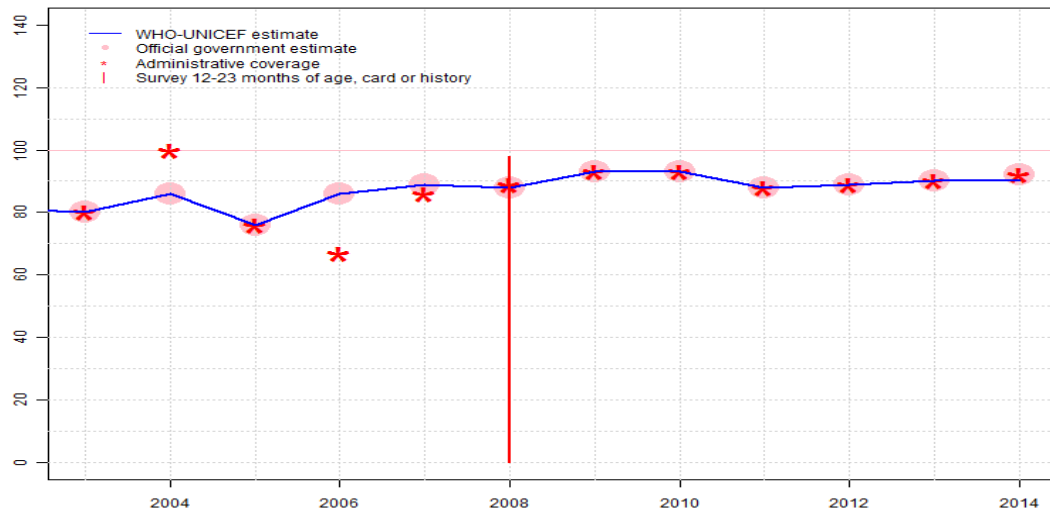
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2005: Estimate based on coverage reported by national government supported by survey. Survey evidence of 84 percent based on 1 survey(s). Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 84 percent based on 1 survey(s). Estimate challenged by: D-S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2008: Estimate based on coverage reported by national government. Myanmar Multiple Indicator Cluster Survey 2009 - 2010 results ignored by working group. In addition to card and recall, vaccination information was collected from midwives registries and midwives participated in data collection. According to the MICS report, midwives may have a tendency inadvertently to over report coverage. Estimate challenged by: D-S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Programme reports a dramatic decline in both the number of children vaccinated and target population for 2014 compared to prior years. Reported coverage levels for 2014 computed using target population data from preliminary 2014 census results. Inconsistent reporting suggests problems with recording and monitoring system, incomplete reporting and/or other gross error. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Reported data for 2014 ignored by working group.

Myanmar - DTP1

MMR - DTP1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	80	86	76	86	89	88	93	93	88	89	90	90
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	80	86	76	86	89	88	93	93	88	89	90	92
Administrative	80	100	76	67	86	89	93	93	88	89	90	92
Survey	NA	NA	NA	NA	NA	98	NA	NA	NA	NA	NA	NA

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

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

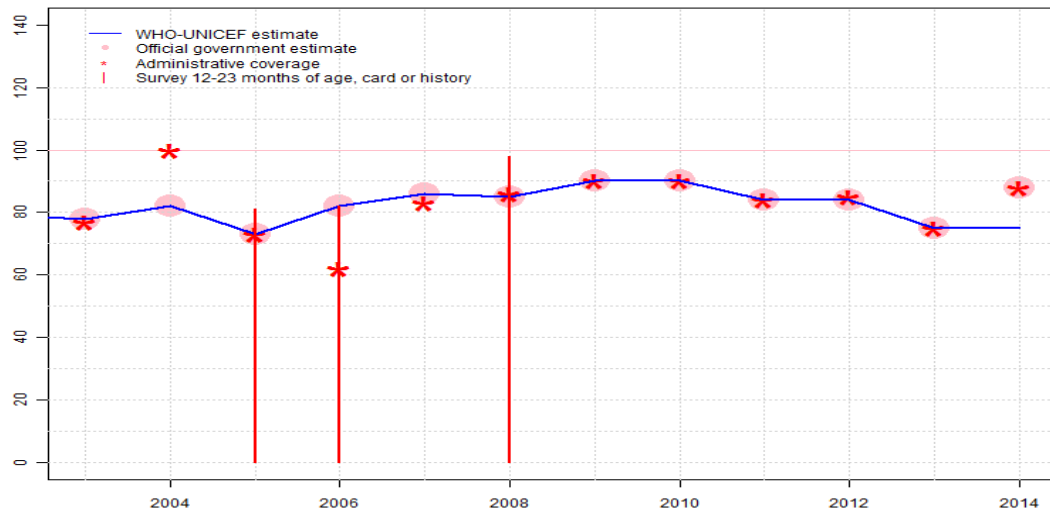
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Nationally reported decline is consistent with reported decline in DTP3. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2008: Estimate based on coverage reported by national government. Myanmar Multiple Indicator Cluster Survey 2009 - 2010 results ignored by working group. In addition to card and recall, vaccination information was collected from midwives registries and midwives participated in data collection. According to the MICS report, midwives may have a tendency inadvertently to over report coverage. Estimate challenged by: D-S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Programme reports a dramatic decline in both the number of children vaccinated and target population for 2014 compared to prior years. Reported coverage levels for 2014 computed using target population data from preliminary 2014 census results. Inconsistent reporting suggests problems with recording and monitoring system, incomplete reporting and/or other gross error. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Reported data for 2014 ignored by working group.

Myanmar - DTP3

MMR - DTP3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	78	82	73	82	86	85	90	90	84	84	75	75
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	78	82	73	82	86	85	90	90	84	84	75	88
Administrative	77	100	73	62	83	86	90	90	84	85	75	88
Survey	NA	NA	81	82	NA	98	NA	NA	NA	NA	NA	NA

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

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

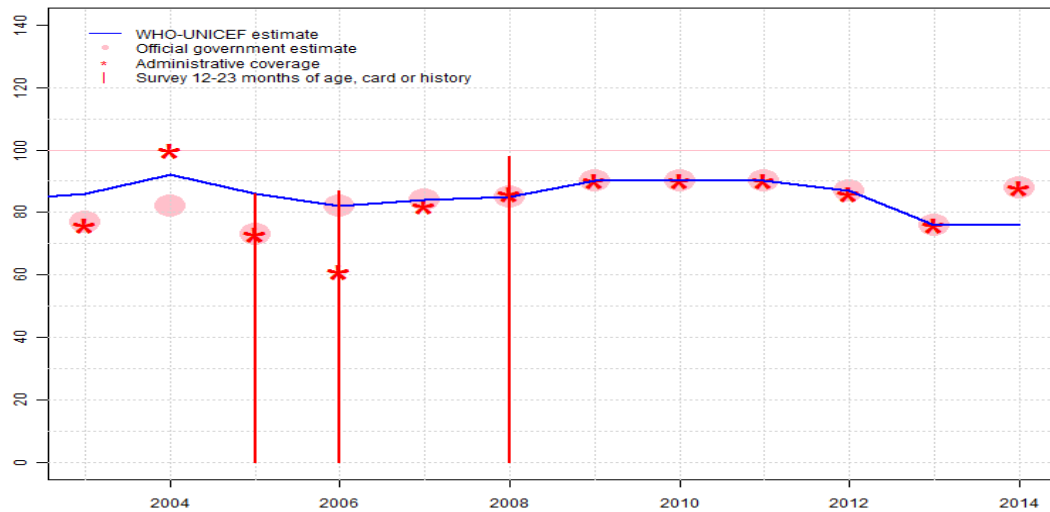
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government supported by survey. Survey evidence of 81 percent based on 1 survey(s). Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 82 percent based on 1 survey(s). Estimate challenged by: D-S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2008: Estimate based on coverage reported by national government. Myanmar Multiple Indicator Cluster Survey 2009 - 2010 results ignored by working group. In addition to card and recall, vaccination information was collected from midwives registries and midwives participated in data collection. According to the MICS report, midwives may have a tendency inadvertently to over report coverage. Estimate challenged by: D-S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on reported administrative data. . Estimates based on administrative coverage. Estimate challenged by: D-
- 2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Programme reports a dramatic decline in both the number of children vaccinated and target population for 2014 compared to prior years. Reported coverage levels for 2014 computed using target population data from preliminary 2014 census results. Inconsistent reporting suggests problems with recording and monitoring system, incomplete reporting and/or other gross error. Reported data excluded. Change in reported coverage from 75 level to 88 percent. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Reported data for 2014 ignored by working group.

Myanmar - Pol3

MMR - Pol3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	86	92	86	82	84	85	90	90	90	87	76	76
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	77	82	73	82	84	85	90	90	90	87	76	88
Administrative	76	100	73	61	82	86	90	90	90	86	76	88
Survey	NA	NA	86	87	NA	98	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:

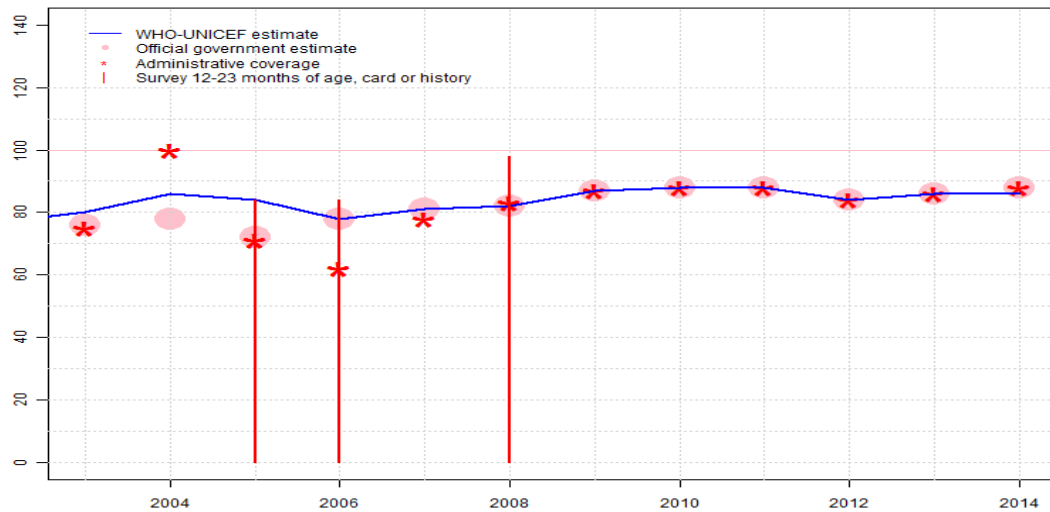
- 2003: Reported data calibrated to 1999 and 2005 levels. Estimate challenged by: D-S-
- 2004: Reported data calibrated to 1999 and 2005 levels. Estimate challenged by: D-S-
- 2005: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 86 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Estimate challenged by: D-S-
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Estimate challenged by: D-S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2008: Estimate based on coverage reported by national government. Myanmar Multiple Indicator Cluster Survey 2009 - 2010 results ignored by working group. In addition to card and recall, vaccination information was collected from midwives registries and midwives participated in data collection. According to the MICS report, midwives may have a tendency inadvertently to over report coverage. Estimate challenged by: D-S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. . Estimate challenged by: D-
- 2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Programme reports a dramatic decline in both the number of children vaccinated and target population for 2014 compared to prior years. Reported coverage levels for 2014 computed using target population data from preliminary 2014 census results. Inconsistent reporting suggests problems with recording and monitoring system, incomplete reporting and/or other gross error. Reported data excluded. Change in reported coverage from 76 level to 88 percent. No nationally representative

Myanmar - Pol3

household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Reported data for 2014 ignored by working group.

Myanmar - MCV1

MMR - MCV1



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	80	86	84	78	81	82	87	88	88	84	86	86
Estimate GoC	●	●	●	●	●	●	●	●	●	●	●	●
Official	76	78	72	78	81	82	87	88	88	84	86	88
Administrative	75	100	71	62	78	83	87	88	88	84	86	88
Survey	NA	NA	84	84	NA	98	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.

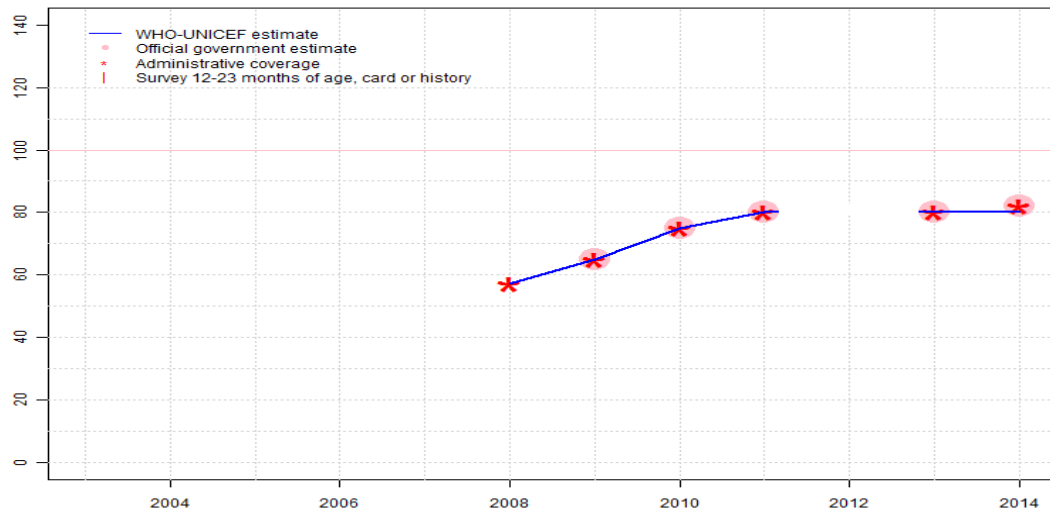
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2003: Reported data calibrated to 2002 and 2005 levels. Estimate challenged by: D-
- 2004: Reported data calibrated to 2002 and 2005 levels. Estimate challenged by: D-
- 2005: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 84 percent based on 1 survey(s). Estimate challenged by: D-R-
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 84 percent based on 1 survey(s). Estimate challenged by: D-S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2008: Estimate based on coverage reported by national government. Myanmar Multiple Indicator Cluster Survey 2009 - 2010 results ignored by working group. In addition to card and recall, vaccination information was collected from midwives registries and midwives participated in data collection. According to the MICS report, midwives may have a tendency inadvertently to over report coverage. Estimate challenged by: D-S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Programme reports a dramatic decline in both the number of children vaccinated and target population for 2014 compared to prior years. Reported coverage levels for 2014 computed using target population data from preliminary 2014 census results. Inconsistent reporting suggests problems with recording and monitoring system, incomplete reporting and/or other gross error. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Reported data for 2014 ignored by working group.

Myanmar - MCV2

MMR - MCV2



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	57	65	75	80	NA	80	80
Estimate GoC	NA	NA	NA	NA	NA	•	•	•	•	NA	•	•
Official	NA	NA	NA	NA	NA	NA	65	75	80	NA	80	82
Administrative	NA	NA	NA	NA	NA	57	65	75	80	NA	80	82
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.

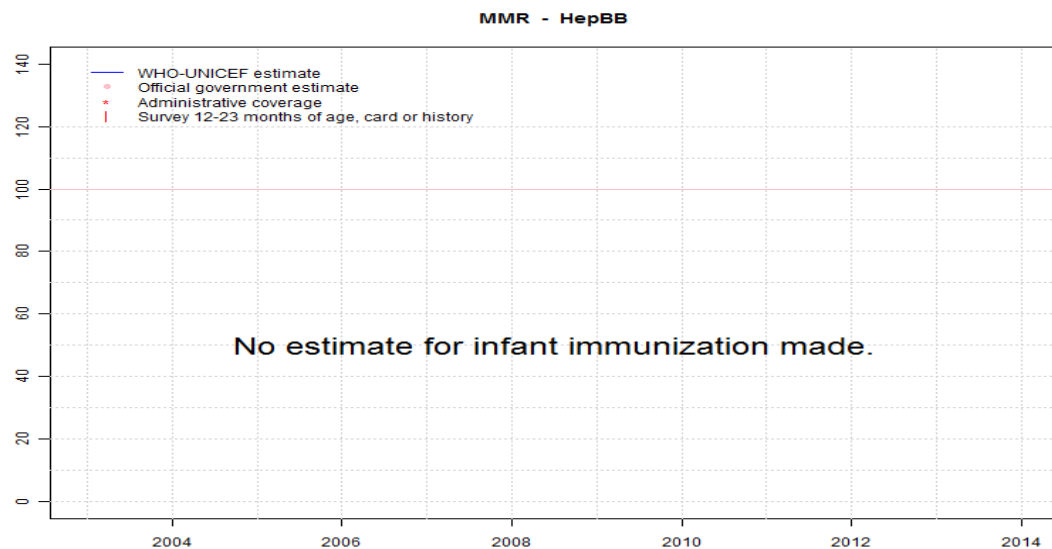
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

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

- 2008: Estimate based on reported administrative estimate. Estimate challenged by: D-S-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2011: Estimate based on coverage reported by national government. Between 2008 and 2012, the second dose of measles was externally funded. Vaccine doses administered were doses left over from campaigns. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on extrapolation from data reported by national government. Reported data excluded. Programme reports a dramatic decline in both the number of children vaccinated and target population for 2014 compared to prior years. Reported coverage levels for 2014 computed using target population data from preliminary 2014 census results. Inconsistent reporting suggests problems with recording and monitoring system, incomplete reporting and/or other gross error. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Reported data for 2014 ignored by working group.

Myanmar - HepBB



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

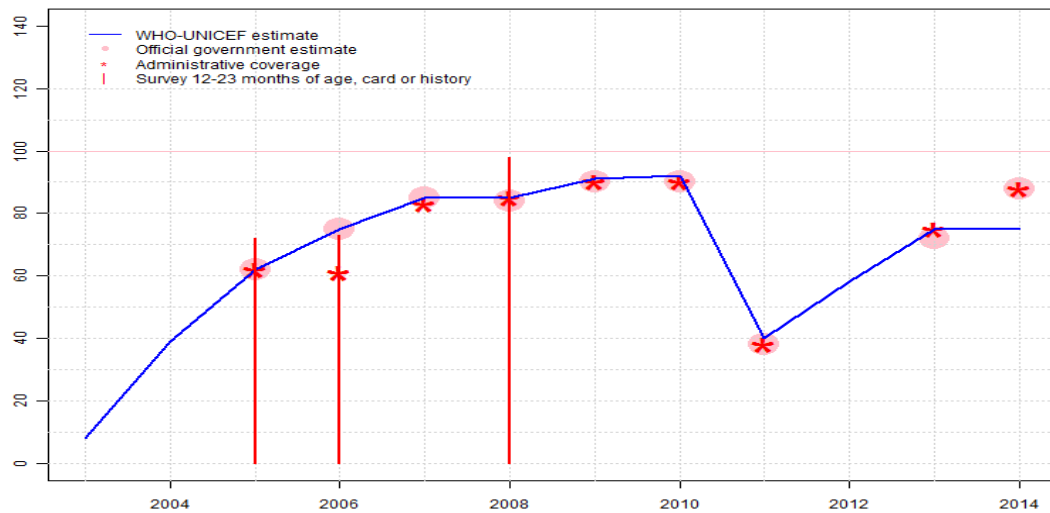
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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.

Myanmar - HepB3

MMR - HepB3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	8	39	62	75	85	85	91	92	40	58	75	75
Estimate GoC	••	•	•	•	•	•	•	•	•	•	•	•
Official	NA	NA	62	75	85	84	90	90	38	NA	72	88
Administrative	NA	NA	62	61	83	85	90	90	38	NA	75	88
Survey	NA	NA	72	73	NA	98	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:

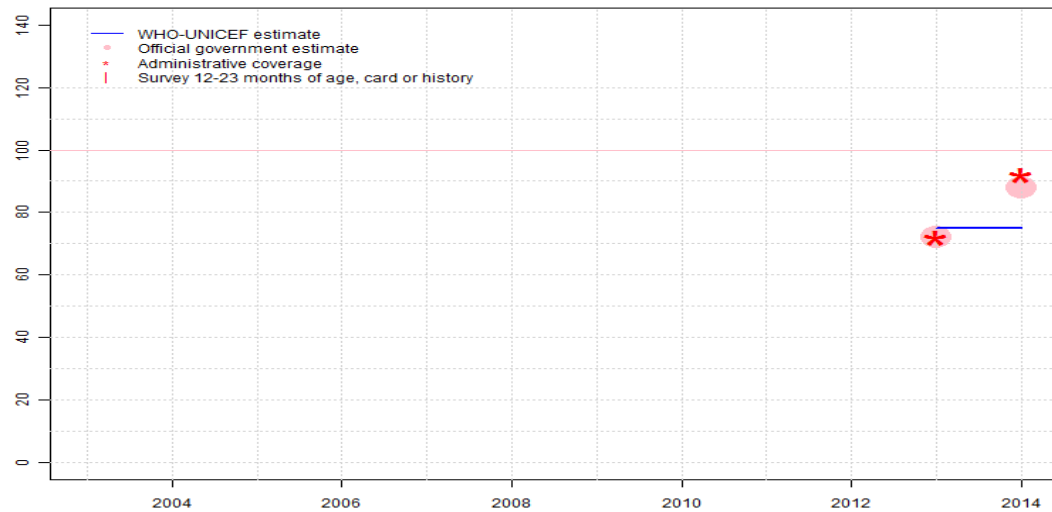
- 2003: Hepatitis B vaccine introduced in part of the country in 2003. 34 percent coverage achieved in 24 percent of the country. HepB partially introduced in 2003 nationally in 2005 reporting started in 2003. Vaccine presentation is HepB . GoC=D+
- 2004: Fifty-four percent coverage achieved in 72 percent of the country. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government supported by survey. Survey evidence of 72 percent based on 1 survey(s). Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 73 percent based on 1 survey(s). Estimate challenged by: D-S-
- 2007: Reported data calibrated to 2006 and 2013 levels. Estimate challenged by: D-S-
- 2008: Reported data calibrated to 2006 and 2013 levels. Myanmar Multiple Indicator Cluster Survey 2009 - 2010 results ignored by working group. In addition to card and recall, vaccination information was collected from midwives registries and midwives participated in data collection. According to the MICS report, midwives may have a tendency inadvertently to over report coverage. Estimate of 85 percent changed from previous revision value of 84 percent. Estimate challenged by: D-S-
- 2009: Reported data calibrated to 2006 and 2013 levels. Estimate of 91 percent changed from previous revision value of 90 percent. Estimate challenged by: D-S-
- 2010: Reported data calibrated to 2006 and 2013 levels. Estimate of 92 percent changed from previous revision value of 90 percent. Estimate challenged by: D-S-
- 2011: Reported data calibrated to 2006 and 2013 levels. Decline in coverage is attributed to vaccine stockout. Estimate of 40 percent changed from previous revision value of 38 percent. Estimate challenged by: D-
- 2012: Reported data calibrated to 2006 and 2013 levels. Stock out in all 330 districts. Estimate of 58 percent changed from previous revision value of 55 percent. Estimate challenged by: D-
- 2013: Estimate is based on coverage for third dose of DTP containing vaccine. Vaccine presentation changed from monovalent HepB to DTP-HepB-Hib combination vaccine in November 2012. Stock out from HepB containing vaccines was reported at national level. Estimate of 75 percent changed from previous revision value of 72 percent. Estimate challenged by: D-R-
- 2014: Estimate is based on coverage for third dose of DTP containing vaccine. Reported data excluded. Programme reports a dramatic decline in both the number of children vaccinated and target population for 2014 compared to

Myanmar - HepB3

prior years. Reported coverage levels for 2014 computed using target population data from preliminary 2014 census results. Inconsistent reporting suggests problems with recording and monitoring system, incomplete reporting and/or other gross error. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Reported data for 2014 ignored by working group.

Myanmar - Hib3

MMR - Hib3



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	75	75
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	72	88
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	72	92
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

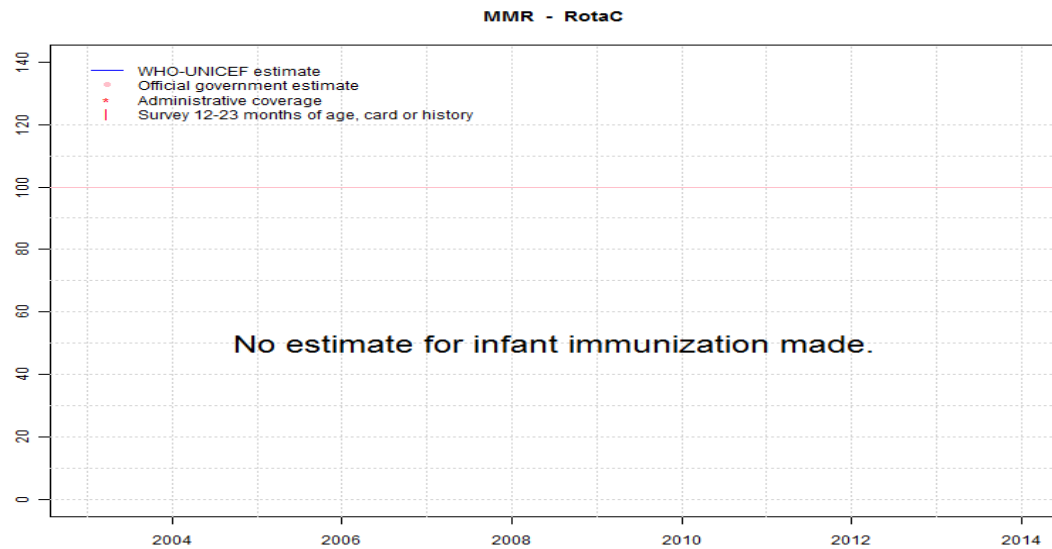
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

Description:

- 2013: Estimate is based on coverage for third dose of DTP containing vaccine. Hib vaccine introduced in November 2012. Reporting started in 2013. Estimate of 75 percent changed from previous revision value of 72 percent. Estimate challenged by: D-R-
- 2014: Estimate is based on coverage for third dose of DTP containing vaccine. Reported data excluded. Programme reports a dramatic decline in both the number of children vaccinated and target population for 2014 compared to prior years. Reported coverage levels for 2014 computed using target population data from preliminary 2014 census results. Inconsistent reporting suggests problems with recording and monitoring system, incomplete reporting and/or other gross error. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=Assigned by working group. Reported data for 2014 ignored by working group.

Myanmar - 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

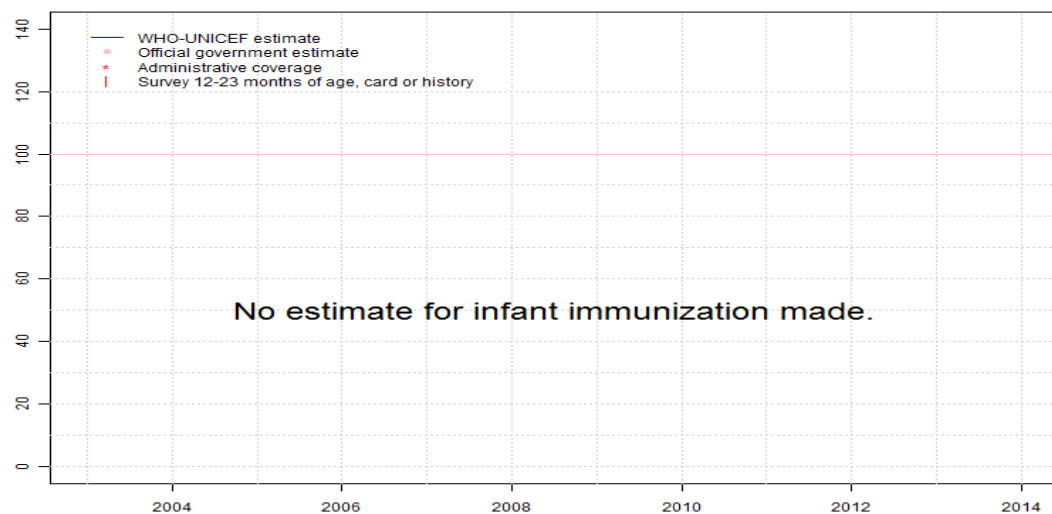
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability 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.

Myanmar - PcV3

MMR - 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.

Myanmar - survey details

2008 Myanmar Multiple Indicator Cluster Survey 2009 - 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	97	12-23 m	3207	96
BCG	Card	96	12-23 m	3207	96
BCG	Card or History	98	12-23 m	3207	96
BCG	History	2	12-23 m	3207	96
DTP1	C or H <12 months	97	12-23 m	3207	96
DTP1	Card	96	12-23 m	3207	96
DTP1	Card or History	98	12-23 m	3207	96
DTP1	History	2	12-23 m	3207	96
DTP3	C or H <12 months	96	12-23 m	3207	96
DTP3	Card	96	12-23 m	3207	96
DTP3	Card or History	98	12-23 m	3207	96
DTP3	History	2	12-23 m	3207	96
HepB1	C or H <12 months	97	12-23 m	3207	96
HepB1	Card	96	12-23 m	3207	96
HepB1	Card or History	98	12-23 m	3207	96
HepB1	History	2	12-23 m	3207	96
HepB3	C or H <12 months	96	12-23 m	3207	96
HepB3	Card	96	12-23 m	3207	96
HepB3	Card or History	98	12-23 m	3207	96
HepB3	History	2	12-23 m	3207	96
MCV1	C or H <12 months	91	12-23 m	3207	96
MCV1	Card	93	12-23 m	3207	96
MCV1	Card or History	98	12-23 m	3207	96
MCV1	History	5	12-23 m	3207	96
Pol1	C or H <12 months	98	12-23 m	3207	96
Pol1	Card	96	12-23 m	3207	96
Pol1	Card or History	99	12-23 m	3207	96
Pol1	History	3	12-23 m	3207	96
Pol3	C or H <12 months	96	12-23 m	3207	96
Pol3	Card	95	12-23 m	3207	96
Pol3	Card or History	98	12-23 m	3207	96
Pol3	History	2	12-23 m	3207	96

2006 Myanmar 2007 Fertility and Reproductive Health Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	84	12-23 m	767	26
DTP3	Card or History	82	12-23 m	767	26
HepB3	Card or History	73	12-23 m	767	26
MCV1	Card or History	84	12-23 m	767	26
Pol3	Card or History	87	12-23 m	767	26

2005 Myanmar 2007 Fertility and Reproductive Health Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	84	24-35 m	905	26
DTP3	Card or History	81	24-35 m	905	26
HepB3	Card or History	72	24-35 m	905	26
MCV1	Card or History	84	24-35 m	905	26
Pol3	Card or History	86	24-35 m	905	26

2004 Myanmar 2007 Fertility and Reproductive Health Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	83	36-47 m	940	26
DTP3	Card or History	80	36-47 m	940	26
HepB3	Card or History	69	36-47 m	940	26
MCV1	Card or History	83	36-47 m	940	26
Pol3	Card or History	86	36-47 m	940	26

2003 Myanmar 2007 Fertility and Reproductive Health Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	83	48-59 m	984	26
DTP3	Card or History	81	48-59 m	984	26
HepB3	Card or History	71	48-59 m	984	26
MCV1	Card or History	83	48-59 m	984	26
Pol3	Card or History	83	48-59 m	984	26

2002 Myanmar Multiple Indicator Cluster Survey (2003)

Myanmar - survey details

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	40	12-23 m	2480	35
BCG	Card <12 months	98	12-23 m	2480	35
BCG	Card or history	93	12-23 m	2480	35
BCG	History	53	12-23 m	2480	35
DTP1	Card	40	12-23 m	2480	35
DTP1	Card <12 months	98	12-23 m	2480	35
DTP1	Card or history	91	12-23 m	2480	35
DTP1	History	51	12-23 m	2480	35
DTP3	Card	38	12-23 m	2480	35
DTP3	Card <12 months	97	12-23 m	2480	35
DTP3	Card or history	83	12-23 m	2480	35
DTP3	History	45	12-23 m	2480	35
MCV1	Card	37	12-23 m	2480	35
MCV1	Card <12 months	94	12-23 m	2480	35
MCV1	Card or history	83	12-23 m	2480	35
MCV1	History	46	12-23 m	2480	35
Pol1	Card	40	12-23 m	2480	35
Pol1	Card <12 months	98	12-23 m	2480	35
Pol1	Card or history	94	12-23 m	2480	35
Pol1	History	54	12-23 m	2480	35
Pol3	Card	38	12-23 m	2480	35
Pol3	Card <12 months	97	12-23 m	2480	35
Pol3	Card or history	90	12-23 m	2480	35

Pol3 History 52 12-23 m 2480 35

1999 Myanmar Multiple Indicator Cluster Survey 2000

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	51	12-23 m	2831	52
BCG	Card or History	93	12-23 m	2831	52
BCG	History	42	12-23 m	2831	52
DTP1	Card	51	12-23 m	2831	52
DTP1	Card or History	92	12-23 m	2831	52
DTP1	History	41	12-23 m	2831	52
DTP3	Card	47	12-23 m	2831	52
DTP3	Card or History	83	12-23 m	2831	52
DTP3	History	36	12-23 m	2831	52
MCV1	Card	47	12-23 m	2831	52
MCV1	Card or History	87	12-23 m	2831	52
MCV1	History	40	12-23 m	2831	52
Pol1	Card	51	12-23 m	2831	52
Pol1	Card or History	96	12-23 m	2831	52
Pol1	History	45	12-23 m	2831	52
Pol3	Card	47	12-23 m	2831	52
Pol3	Card or History	90	12-23 m	2831	52
Pol3	History	43	12-23 m	2831	52

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

Myanmar

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

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

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

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

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

Year	PAB coverage estimate (%)
2003	86
2004	87
2005	89
2006	92
2007	93
2008	93
2009	93
2010	93
2011	93
2012	93
2013	87
2014	87

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