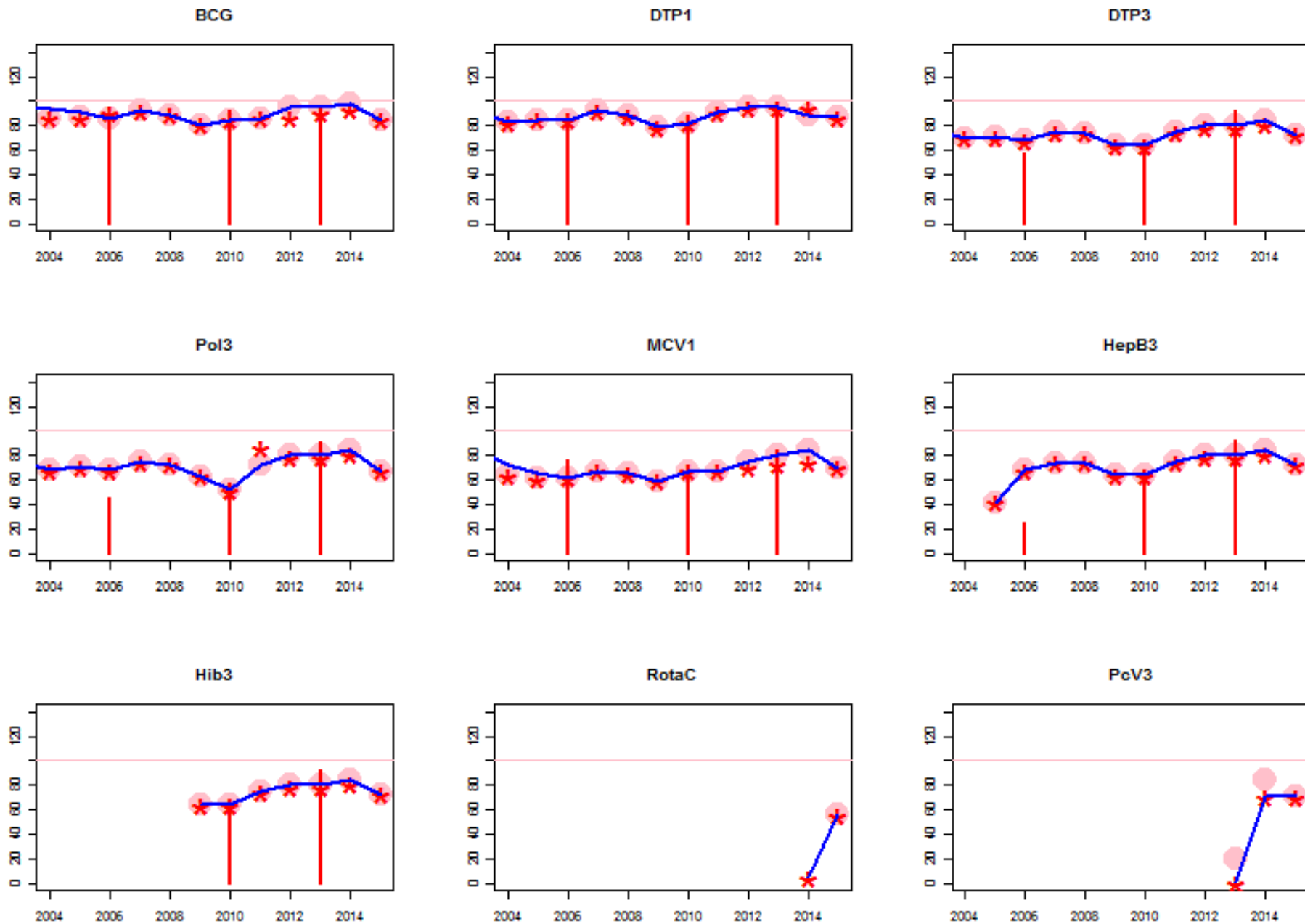
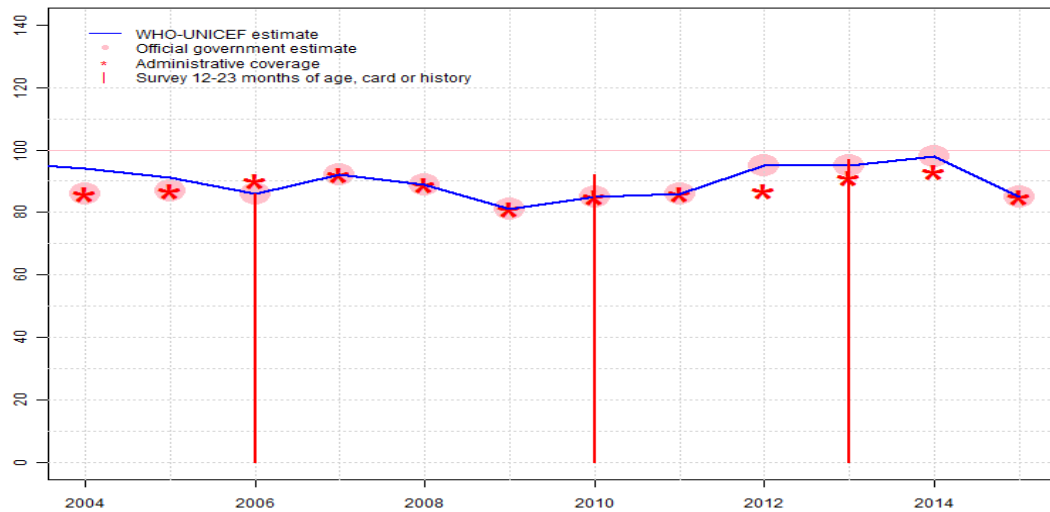


Mauritania: WHO and UNICEF estimates of immunization coverage: 2015 revision



Mauritania - BCG

MRT - BCG



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	94	91	86	92	89	81	85	86	95	95	98	85
Estimate GoC	●●	●●	●●●	●●●	●●●	●●	●●●	●●●	●●●	●●●	●	●
Official	86	87	86	92	89	81	85	86	95	95	98	85
Administrative	86	87	90	92	89	81	85	86	87	91	93	85
Survey	NA	NA	86	NA	NA	NA	92	NA	NA	97	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

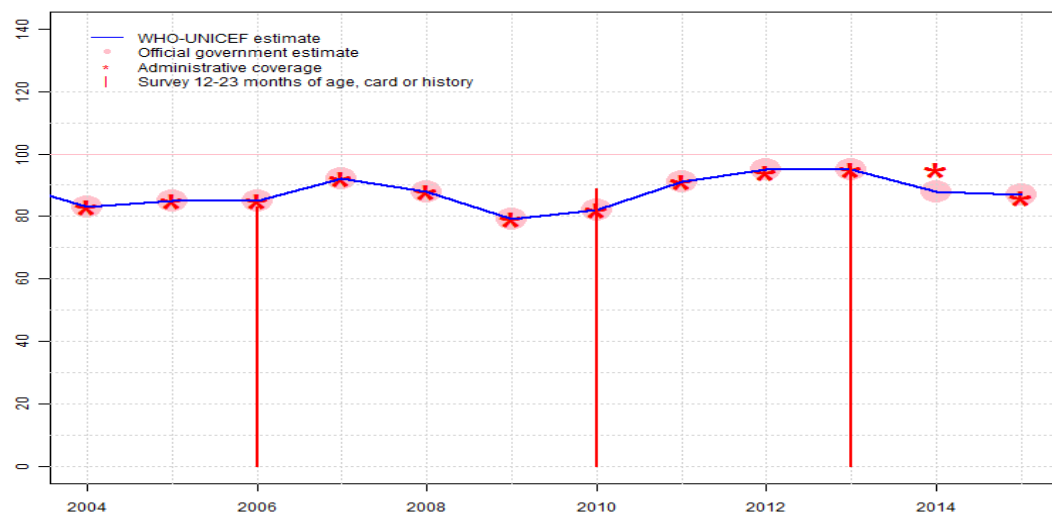
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Reported data calibrated to 2003 and 2006 levels. GoC=S+ D+
- 2005: Reported data calibrated to 2003 and 2006 levels. GoC=S+ D+
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 86 percent based on 1 survey(s). GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 92 percent based on 1 survey(s). GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). GoC=R+ S+ D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Unexplained decline in reported coverage between 2014 and 2015. Estimate challenged by: D-

Mauritania - DTP1

MRT - DTP1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	83	85	85	92	88	79	82	91	95	95	88	87
Estimate GoC	•	•••	•••	•	•	•	•	•	•	•	•	•
Official	83	85	85	92	88	79	82	91	95	95	88	87
Administrative	83	85	85	92	88	79	82	91	94	95	95	86
Survey	NA	NA	83	NA	NA	NA	89	NA	NA	96	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

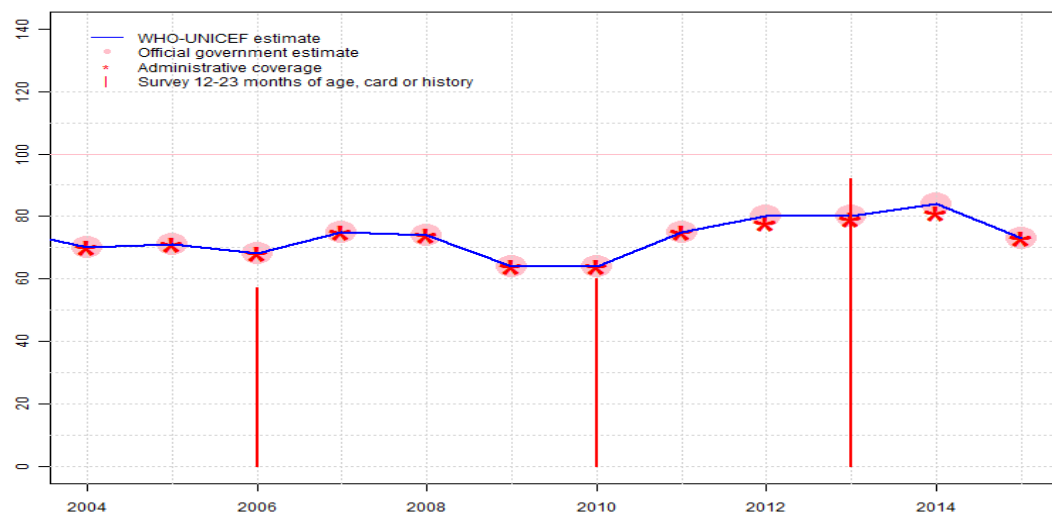
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 83 percent based on 1 survey(s). GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Estimate challenged by: D-
- 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 supported by survey. Survey evidence of 96 percent based on 1 survey(s). Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Mauritania - DTP3

MRT - DTP3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	70	71	68	75	74	64	64	75	80	80	84	73
Estimate GoC	●●●	●●●	●●●	●●●	●●●	●	●●●	●●●	●●●	●●●	●	●
Official	70	71	68	75	74	64	64	75	80	80	84	73
Administrative	70	71	68	75	74	64	64	75	78	79	81	73
Survey	NA	NA	57	NA	NA	NA	60	NA	NA	92	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

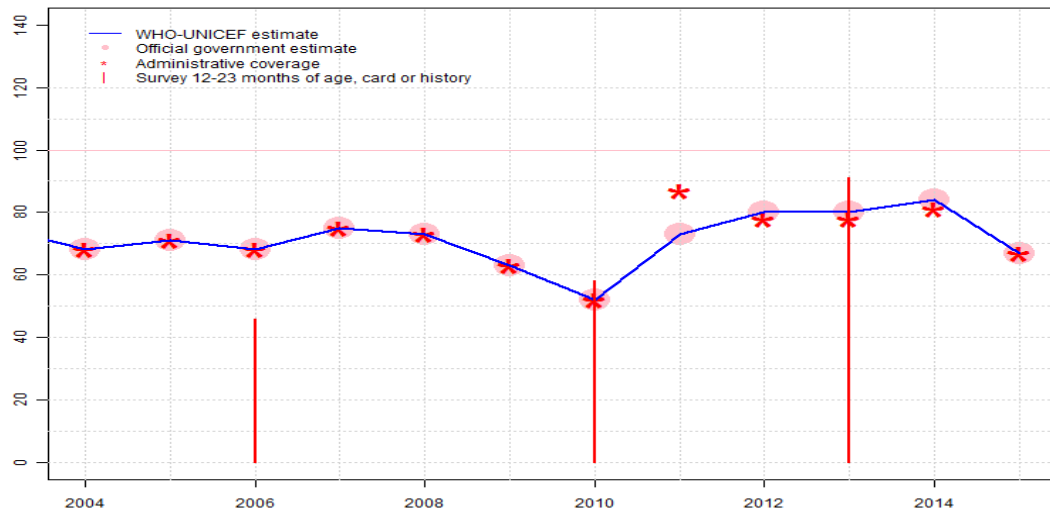
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 78 percent based on 1 survey(s). Mauritania Multiple Indicator Cluster Survey 2007 card or history results of 57 percent modified for recall bias to 78 percent based on 1st dose card or history coverage of 83 percent, 1st dose card only coverage of 31 percent and 3d dose card only coverage of 29 percent. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 68 percent based on 1 survey(s). Mauritania Multiple Indicator Cluster Survey 2011 card or history results of 60 percent modified for recall bias to 68 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 23 percent. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. Estimate based on reported data. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Report of the External EPI Review, Mauritania, 2014 card or history results of 92 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 47 percent and 3d dose card only coverage of 43 percent. GoC=R+ S+ D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Programme reports decline in reported coverage due to insufficient funding for conduct of outreach activity. Estimate challenged by: D-

Mauritania - Pol3

MRT - Pol3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	68	71	68	75	73	63	52	73	80	80	84	67
Estimate GoC	●●●	●●●	●●●	●●●	●●●	●	●●●	●	●●●	●●●	●	●
Official	68	71	68	75	73	63	52	73	80	80	84	67
Administrative	68	71	68	75	73	63	52	87	78	78	81	67
Survey	NA	NA	46	NA	NA	NA	58	NA	NA	91	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

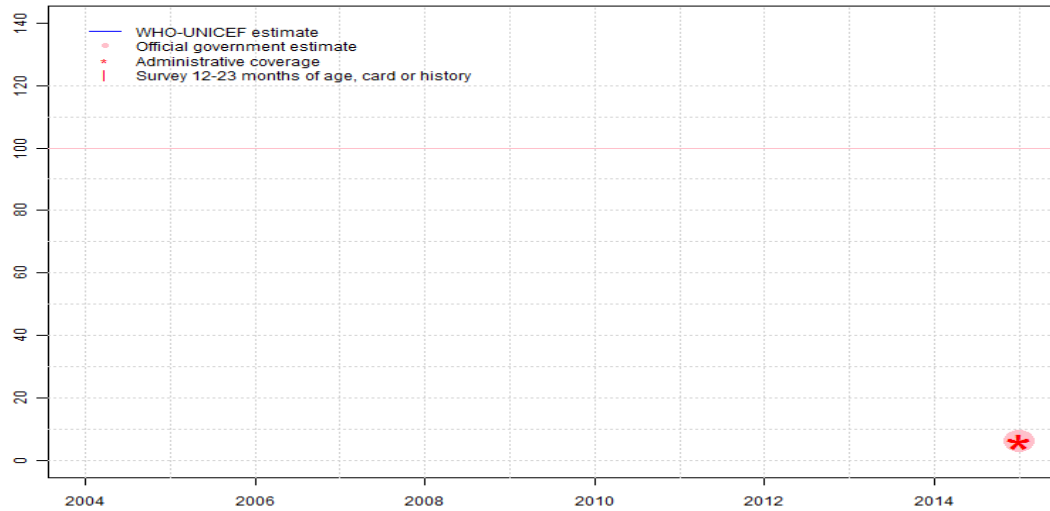
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2004: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 75 percent based on 1 survey(s). Mauritania Multiple Indicator Cluster Survey 2007 card or history results of 46 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 80 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 28 percent. GoC=R+ S+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 62 percent based on 1 survey(s). Mauritania Multiple Indicator Cluster Survey 2011 card or history results of 58 percent modified for recall bias to 62 percent based on 1st dose card or history coverage of 85 percent, 1st dose card only coverage of 22 percent and 3d dose card only coverage of 16 percent. Decline is likely the results of three months of vaccine shortage. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. Increase is most likely the results of recovery from previous years vaccine shortage. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Report of the External EPI Review, Mauritania, 2014 card or history results of 91 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 95 percent, 1st dose card only coverage of 46 percent and 3d dose card only coverage of 43 percent. GoC=R+ S+ D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Programme reports decline in reported coverage due to insufficient funding for conduct of outreach activity. Estimate challenged by: D-

Mauritania - IPV1

MRT - IPV1



Description:

2015: Estimate based on coverage reported by national government. IPV introduced during November 2015. GoC=R+ D+

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

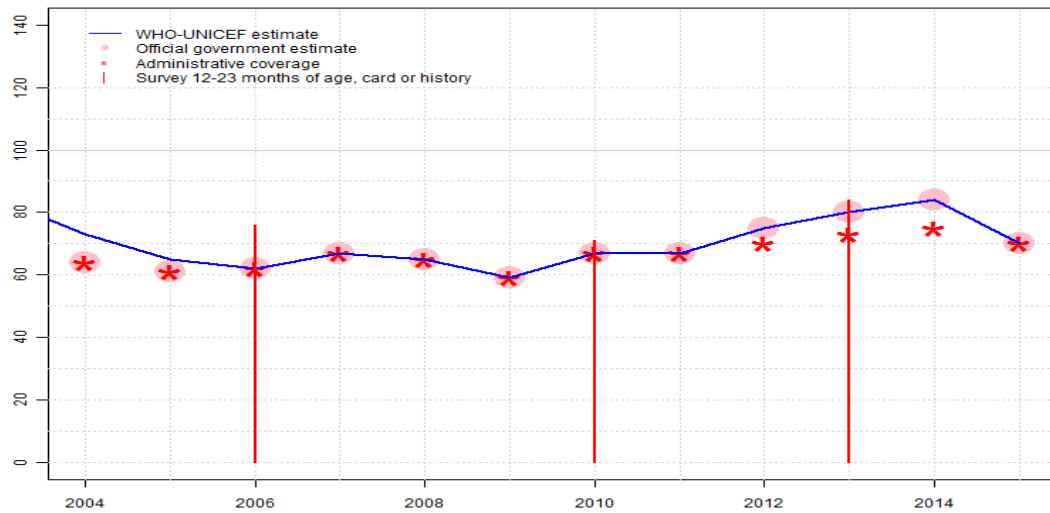
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Mauritania - MCV1

MRT - MCV1



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	73	65	62	67	65	59	67	67	75	80	84	70
Estimate GoC	●●	●●	●●	●●●	●●●	●	●●●	●●●	●●●	●●●	●●●	●
Official	64	61	62	67	65	59	67	67	75	80	84	70
Administrative	64	61	62	67	65	59	67	67	70	73	75	70
Survey	NA	NA	76	NA	NA	NA	71	NA	NA	84	NA	NA

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

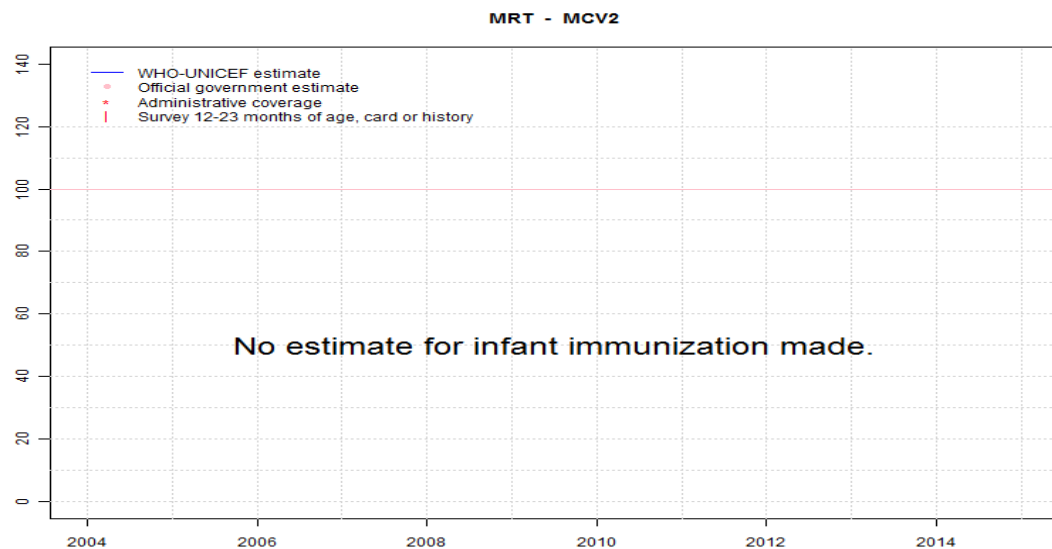
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2004: Reported data calibrated to 2003 and 2006 levels. GoC=S+ D+
- 2005: Reported data calibrated to 2003 and 2006 levels. GoC=D+
- 2006: Survey confirms reported data for all antigens. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 71 percent based on 1 survey(s). GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 84 percent based on 1 survey(s). GoC=R+ S+ D+
- 2014: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2015: Estimate based on coverage reported by national government. Programme reports decline in reported coverage due to insufficient funding for conduct of outreach activity. Estimate challenged by: D-

Mauritania - MCV2



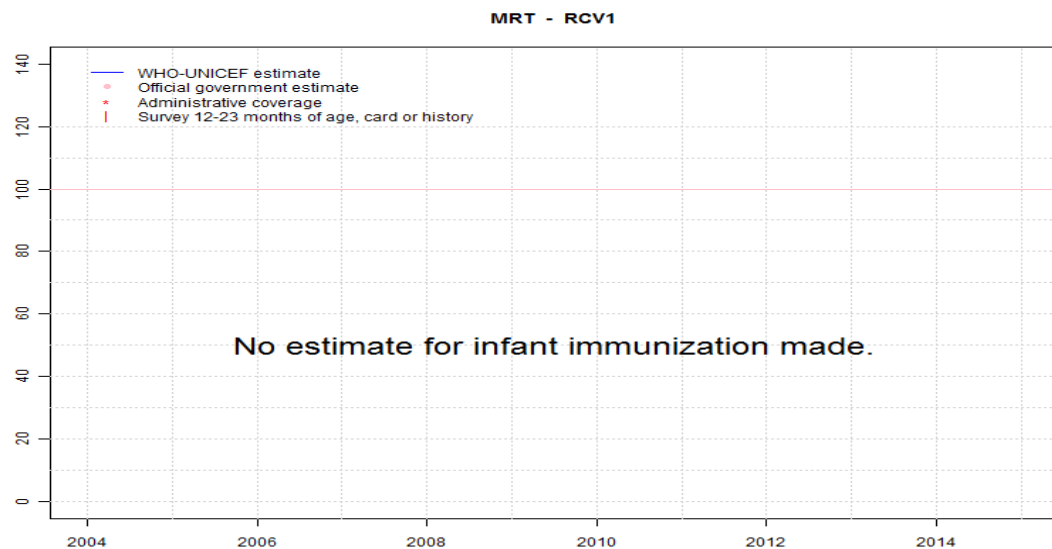
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Mauritania - RCV1



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

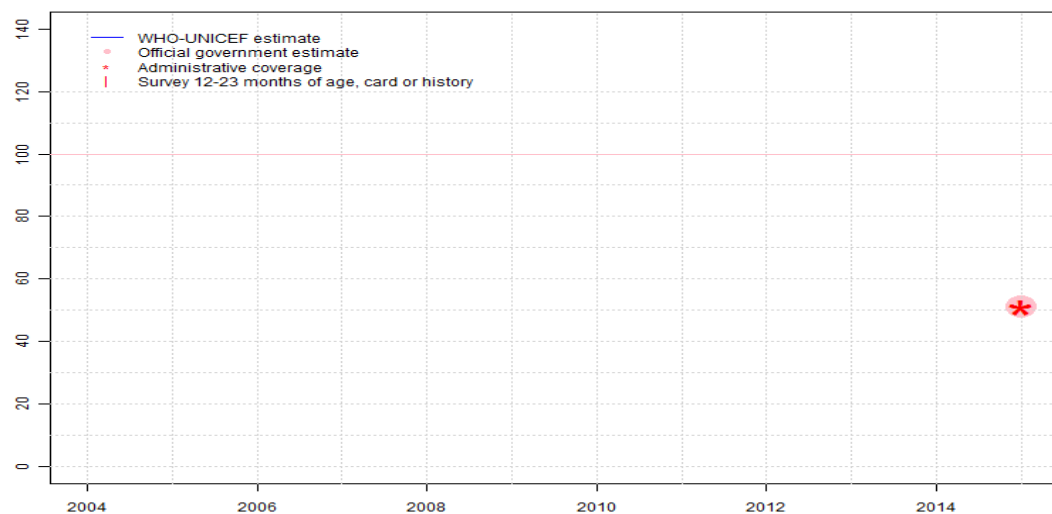
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Mauritania - HepBB

MRT - HepBB



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	51
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	51
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	51
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

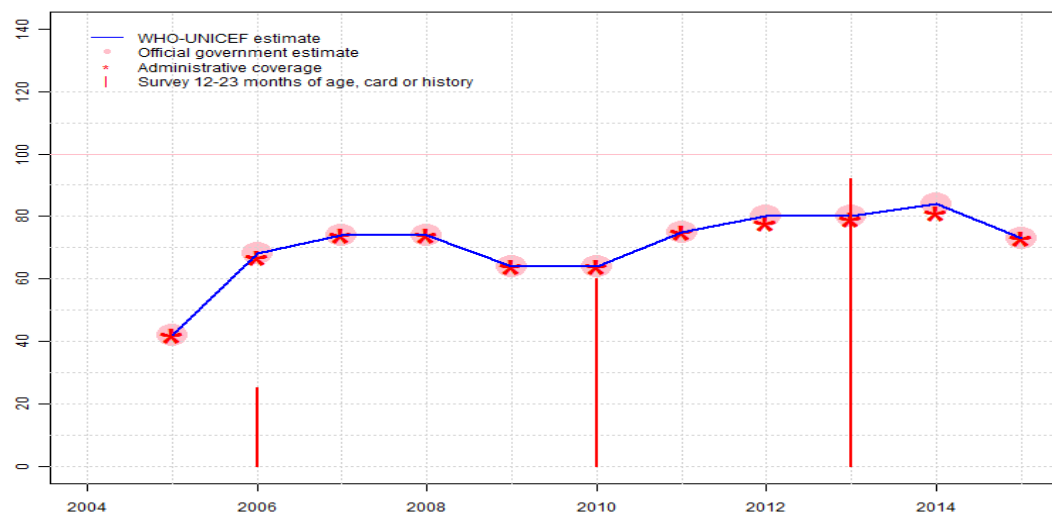
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2015: Estimate based on coverage reported by national government. HepB birth dose introduced in January 2013 but reported coverage for 2013 and 2014 reflect doses delivered during first 14 days of life and therefore not a true birth dose. During 2015, reported coverage reflects doses delivered at birth. Estimate challenged by: D-

Mauritania - HepB3

MRT - HepB3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	42	68	74	74	64	64	75	80	80	84	73
Estimate GoC	NA	•	•	•	•	•	•••	•••	•••	•••	•	•
Official	NA	42	68	74	74	64	64	75	80	80	84	73
Administrative	NA	42	67	74	74	64	64	75	78	79	81	73
Survey	NA	NA	25	NA	NA	NA	60	NA	NA	92	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

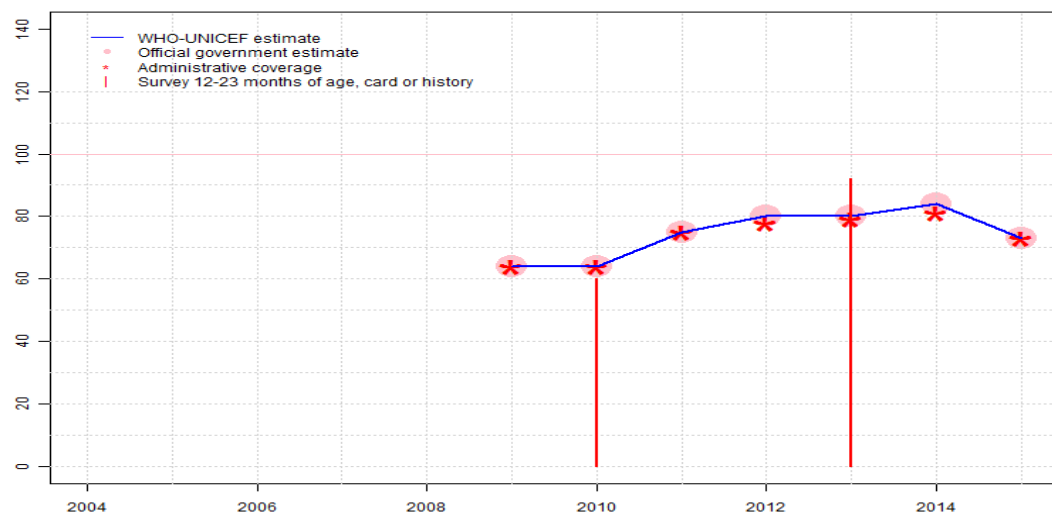
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2005: Estimate based on reported data. HepB vaccine introduced in 2005. Estimate challenged by: S-
- 2006: Estimate based on reported data. Mauritania Multiple Indicator Cluster Survey 2007 results ignored by working group. Insufficient information to adjust survey results for recall bias. Estimate challenged by: S-
- 2007: Estimate based on reported data. Estimate challenged by: S-
- 2008: Estimate based on reported data. Estimate challenged by: S-
- 2009: Estimate based on reported data. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 68 percent based on 1 survey(s). Mauritania Multiple Indicator Cluster Survey 2011 card or history results of 60 percent modified for recall bias to 68 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 23 percent. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Report of the External EPI Review, Mauritania, 2014 card or history results of 92 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 47 percent and 3d dose card only coverage of 43 percent. GoC=R+ S+ D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Programme reports decline in reported coverage due to insufficient funding for conduct of outreach activity. Estimate challenged by: D-

Mauritania - Hib3

MRT - Hib3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	64	64	75	80	80	84	73
Estimate GoC	NA	NA	NA	NA	NA	•	•••	•••	•••	•••	•	•
Official	NA	NA	NA	NA	NA	64	64	75	80	80	84	73
Administrative	NA	NA	NA	NA	NA	64	64	75	78	79	81	73
Survey	NA	NA	NA	NA	NA	NA	60	NA	NA	92	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

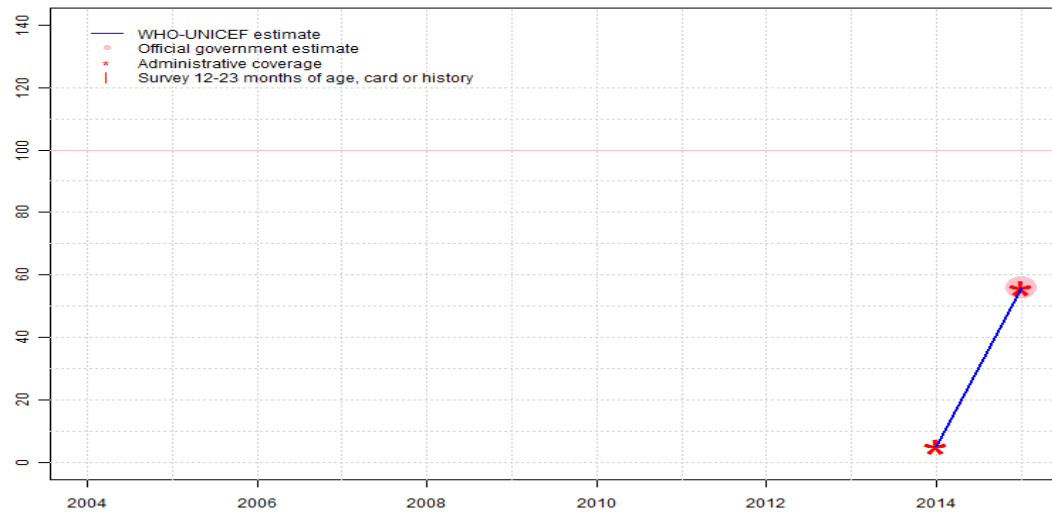
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2009: Estimate based on reported data. Hib vaccine introduced in 2009. Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government supported by survey. Survey evidence of 68 percent based on 1 survey(s). Mauritania Multiple Indicator Cluster Survey 2011 card or history results of 60 percent modified for recall bias to 68 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 30 percent and 3d dose card only coverage of 23 percent. GoC=R+ S+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government supported by survey. Survey evidence of 88 percent based on 1 survey(s). Report of the External EPI Review, Mauritania, 2014 card or history results of 92 percent modified for recall bias to 88 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 47 percent and 3d dose card only coverage of 43 percent. GoC=R+ S+ D+
- 2014: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2015: Estimate based on coverage reported by national government. Programme reports decline in reported coverage due to insufficient funding for conduct of outreach activity. Estimate challenged by: D-

Mauritania - RotaC

MRT - RotaC



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	56
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	●	●
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	56
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	56
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

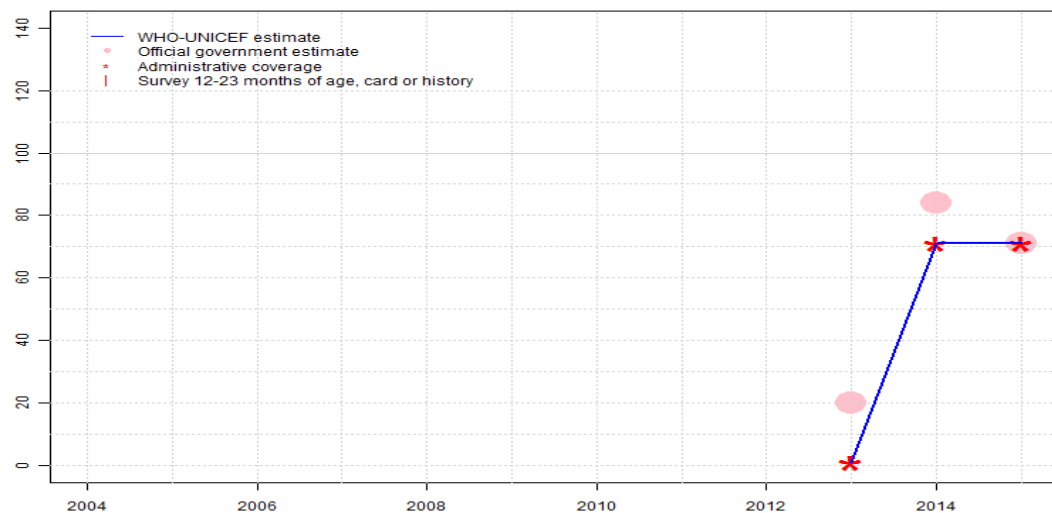
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2014: Estimate based on reported administrative estimate. Rotavirus vaccine introduced during December 2014. GoC=Assigned by working group. Consistency with other vaccines during an introduction period.
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Mauritania - PcV3

MRT - PcV3



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	71	71
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	•	•	•
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	84	71
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	71	71
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2015 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

Description:

- 2013: Estimate based on reported administrative estimate. Pneumococcal conjugate vaccine introduced in 2013. GoC=Assigned by working group. Consistency with other vaccines and during an introduction period.
- 2014: Estimate based on reported administrative estimate. Reported coverage reflects doses administered to national target population following introduction. Adjustment from administrative coverage unexplained. Estimate of 71 percent changed from previous revision value of 84 percent. GoC=Assigned by working group. Consistency with other vaccines and during an introduction period.
- 2015: Estimate based on coverage reported by national government. Estimate challenged by: D-

Mauritania - survey details

2013 Rapport de la revue externe du PEV Mauritanie 2014

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	52	12-23 m	-	55
BCG	Card or History	97	12-23 m	3727	55
BCG	History	45	12-23 m	-	55
DTP1	Card	47	12-23 m	-	55
DTP1	Card or History	96	12-23 m	3727	55
DTP1	History	49	12-23 m	-	55
DTP3	Card	43	12-23 m	-	55
DTP3	Card or History	92	12-23 m	3727	55
DTP3	History	48	12-23 m	-	55
HepB1	Card	47	12-23 m	-	55
HepB1	Card or History	96	12-23 m	3727	55
HepB1	History	49	12-23 m	-	55
HepB3	Card	43	12-23 m	-	55
HepB3	Card or History	92	12-23 m	3727	55
HepB3	History	48	12-23 m	-	55
Hib1	Card	47	12-23 m	-	55
Hib1	Card or History	96	12-23 m	3727	55
Hib1	History	49	12-23 m	-	55
Hib3	Card	43	12-23 m	-	55
Hib3	Card or History	92	12-23 m	3727	55
Hib3	History	48	12-23 m	-	55
MCV1	Card	37	12-23 m	-	55
MCV1	Card or History	84	12-23 m	3727	55
MCV1	History	47	12-23 m	-	55
Pol1	Card	46	12-23 m	-	55
Pol1	Card or History	95	12-23 m	3727	55
Pol1	History	49	12-23 m	-	55
Pol3	Card	43	12-23 m	-	55
Pol3	Card or History	91	12-23 m	3727	55
Pol3	History	48	12-23 m	-	55

2010 Mauritanie Enquête par Grappes à Indicateurs Multiples 2011

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
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BCG	C or H <12 months	91	12-23 m	1764	32
BCG	Card	30	12-23 m	-	32
BCG	Card or History	92	12-23 m	1764	32
BCG	History	61	12-23 m	-	32
DTP1	C or H <12 months	88	12-23 m	1764	32
DTP1	Card	30	12-23 m	-	32
DTP1	Card or History	89	12-23 m	1764	32
DTP1	History	59	12-23 m	-	32
DTP3	C or H <12 months	57	12-23 m	1764	32
DTP3	Card	23	12-23 m	-	32
DTP3	Card or History	60	12-23 m	1764	32
DTP3	History	37	12-23 m	-	32
HepB1	C or H <12 months	88	12-23 m	1764	32
HepB1	Card	30	12-23 m	-	32
HepB1	Card or History	89	12-23 m	1764	32
HepB1	History	59	12-23 m	-	32
HepB3	C or H <12 months	57	12-23 m	1764	32
HepB3	Card	23	12-23 m	-	32
HepB3	Card or History	60	12-23 m	1764	32
HepB3	History	37	12-23 m	-	32
Hib1	C or H <12 months	88	12-23 m	1764	32
Hib1	Card	30	12-23 m	-	32
Hib1	Card or History	89	12-23 m	1764	32
Hib1	History	59	12-23 m	-	32
Hib3	C or H <12 months	57	12-23 m	1764	32
Hib3	Card	23	12-23 m	-	32
Hib3	Card or History	60	12-23 m	1764	32
Hib3	History	37	12-23 m	-	32
MCV1	C or H <12 months	63	12-23 m	1764	32
MCV1	Card	15	12-23 m	-	32
MCV1	Card or History	71	12-23 m	1764	32
MCV1	History	57	12-23 m	-	32
Pol1	C or H <12 months	82	12-23 m	1764	32
Pol1	Card	22	12-23 m	-	32
Pol1	Card or History	85	12-23 m	1764	32
Pol1	History	63	12-23 m	-	32
Pol3	C or H <12 months	54	12-23 m	1764	32
Pol3	Card	16	12-23 m	-	32
Pol3	Card or History	58	12-23 m	1764	32
Pol3	History	42	12-23 m	-	32

Mauritania - survey details

2006 L'enquête par grappes à indicateurs multiples de la Mauritanie (MICS 2007)

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	84	12-23 m	1681	32
BCG	Card	32	12-23 m	1681	32
BCG	Card or History	86	12-23 m	1681	32
BCG	History	53	12-23 m	1681	32
DTP1	C or H <12 months	79	12-23 m	1681	32
DTP1	Card	31	12-23 m	1681	32
DTP1	Card or History	83	12-23 m	1681	32
DTP1	History	52	12-23 m	1681	32
DTP3	C or H <12 months	53	12-23 m	1681	32
DTP3	Card	29	12-23 m	1681	32
DTP3	Card or History	57	12-23 m	1681	32
DTP3	History	28	12-23 m	1681	32
HepB1	Card or History	27	12-23 m	1681	32
HepB3	Card or History	25	12-23 m	1681	32
MCV1	C or H <12 months	74	12-23 m	1681	32
MCV1	Card	28	12-23 m	1681	32
MCV1	Card or History	76	12-23 m	1681	32
MCV1	History	48	12-23 m	1681	32
Pol1	C or H <12 months	76	12-23 m	1681	32
Pol1	Card	30	12-23 m	1681	32
Pol1	Card or History	80	12-23 m	1681	32
Pol1	History	50	12-23 m	1681	32
Pol3	C or H <12 months	42	12-23 m	1681	32
Pol3	Card	28	12-23 m	1681	32
Pol3	Card or History	46	12-23 m	1681	32
Pol3	History	18	12-23 m	1681	32

2003 Enquete sur la couverture vaccinale et la mobilisation sociale, Mauritanie, 2004

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or history	96	12-23 m	2774	42

DTP1	Card	36	12-23 m	2774	42
DTP1	Card or history	92	12-23 m	2774	42
DTP3	Card	30	12-23 m	2774	42
DTP3	Card or history	84	12-23 m	2774	42
MCV1	Card	30	12-23 m	2774	42
MCV1	Card or history	84	12-23 m	2774	42
Pol1	Card	34	12-23 m	2774	42
Pol1	Card or history	89	12-23 m	2774	42
Pol3	Card	29	12-23 m	2774	42
Pol3	Card or history	82	12-23 m	2774	42

1999 Enquête Démographique et de Santé Mauritanie 2000-2001, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	68	12-23 m	950	34
BCG	Card	33	12-23 m	950	34
BCG	Card or History	75	12-23 m	950	34
BCG	History	42	12-23 m	950	34
DTP1	C or H <12 months	61	12-23 m	950	34
DTP1	Card	33	12-23 m	950	34
DTP1	Card or History	70	12-23 m	950	34
DTP1	History	37	12-23 m	950	34
DTP3	C or H <12 months	33	12-23 m	950	34
DTP3	Card	25	12-23 m	950	34
DTP3	Card or History	40	12-23 m	950	34
DTP3	History	15	12-23 m	950	34
MCV1	C or H <12 months	45	12-23 m	950	34
MCV1	Card	26	12-23 m	950	34
MCV1	Card or History	62	12-23 m	950	34
MCV1	History	36	12-23 m	950	34
Pol1	C or H <12 months	70	12-23 m	950	34
Pol1	Card	34	12-23 m	950	34
Pol1	Card or History	80	12-23 m	950	34
Pol1	History	46	12-23 m	950	34
Pol3	C or H <12 months	37	12-23 m	950	34
Pol3	Card	26	12-23 m	950	34
Pol3	Card or History	44	12-23 m	950	34
Pol3	History	18	12-23 m	950	34

Mauritania - survey details

1998 Enquête Nationale de Couverture Vaccinale-MSAS, 1999

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or Scar	80	12-23 m	2287	78

DTP1	Card or History	56	12-23 m	2287	78
DTP3	Card or History	16	12-23 m	2287	78
MCV1	Card or History	62	12-23 m	2287	78
Pol1	Card or History	56	12-23 m	2287	78
Pol3	Card or History	16	12-23 m	2287	78

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

Mauritania

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

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

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

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

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

Year	PAB coverage estimate (%)
2004	62
2005	59
2006	62
2007	77
2008	77
2009	87
2010	87
2011	80
2012	80
2013	80
2014	80
2015	80

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.