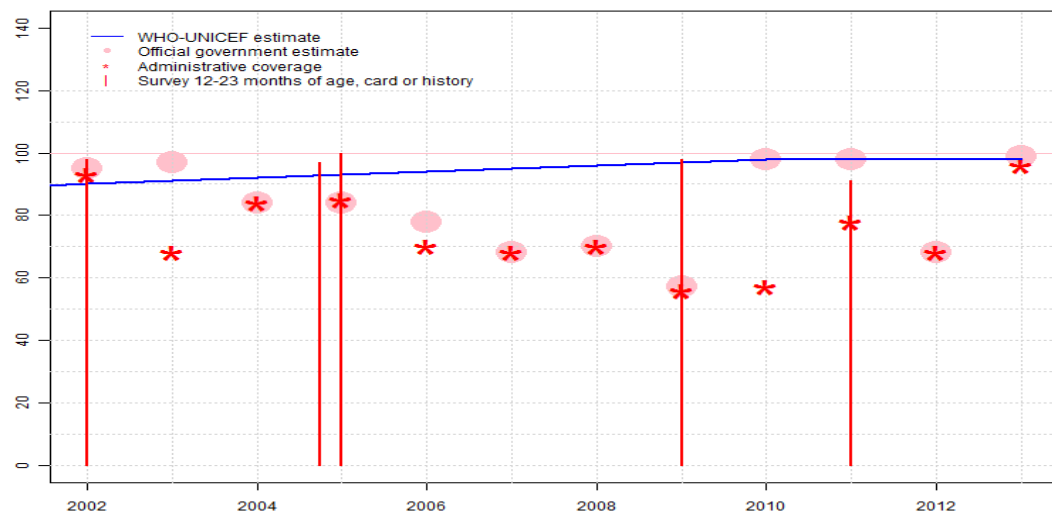


# Swaziland - BCG

SWZ - BCG



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	90	91	92	93	94	95	96	97	98	98	98	98
Estimate GoC	•	•	•	••	•	•	•	•	•	•	•	••
Official	95	97	84	84	78	68	70	57	98	98	68	99
Administrative	93	68	84	85	70	68	70	56	57	78	68	96
Survey	98	NA	NA	*	NA	NA	NA	98	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: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

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

## Description:

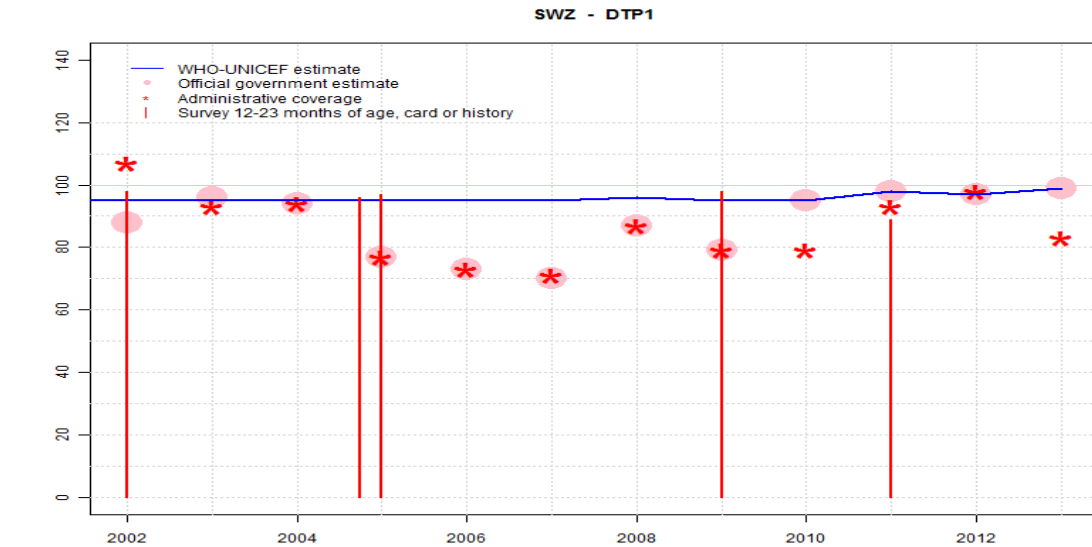
- 2002: Estimate based on interpolation between coverage reported by national government. Survey results ignored. Sample size 209 less than 300. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2003: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2004: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2005: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 99 percent based on 2 survey(s). Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=S+ D+
- 2006: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2007: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2008: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2009: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Decline in reported coverage from 70 percent to 57 percent with increase to 98 percent. Estimate challenged by: D-
- 2010: Estimate is based on nationally reported data. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 91 percent based on 1 survey(s). Estimate challenged by: D-
- 2012: Estimate based on extrapolation from data reported by national government. Reported data excluded. Decline in reported coverage from 98 percent to 68 percent with increase to 99 percent. Estimate challenged by: D-
- 2013: Estimate based on extrapolation from data reported by national government.

# Swaziland - BCG

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ment. Reported data excluded. Change in reported coverage from 68 level  
to 99 percent. GoC=S+ D+

# Swaziland - DTP1



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	95	95	95	95	95	95	96	95	95	98	97	99
Estimate GoC	••	••	••	••	•	•	•	•	•	•	•••	•
Official	88	96	94	77	73	70	87	79	95	98	97	99
Administrative	107	93	94	77	73	71	87	79	79	93	98	83
Survey	98	NA	NA	*	NA	NA	NA	98	NA	89	NA	NA

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

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

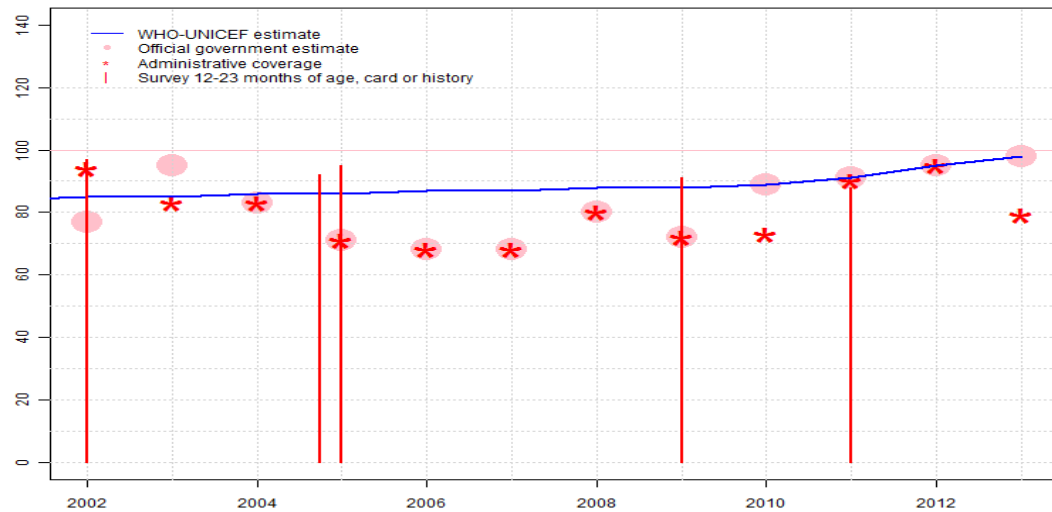
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2002: Reported data calibrated to 1997 and 2005 levels. Survey results ignored. Sample size 209 less than 300. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=D+
- 2003: Reported data calibrated to 1997 and 2005 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=S+ D+
- 2004: Reported data calibrated to 1997 and 2005 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=S+ D+
- 2005: Estimate based on extrapolation from data reported by national government supported by survey. Survey evidence of 97 percent based on 2 survey(s). Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=S+ D+
- 2006: Estimate based on DTP3 coverage of 87. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-R-
- 2007: Estimate based on DTP3 coverage of 87. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-R-
- 2008: Estimate based on DTP3 coverage of 88. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: R-
- 2009: Estimate based on extrapolation from data reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2010: Estimate is based on nationally reported data. Estimate challenged by: D-
- 2011: 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-
- 2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-

# Swaziland - DTP3

SWZ - DTP3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	85	85	86	86	87	87	88	88	89	91	95	98
Estimate GoC	••	••	••	••	••	••	••	•	•	•••	•••	•
Official	77	95	83	71	68	68	80	72	89	91	95	98
Administrative	94	83	83	71	68	68	80	72	73	90	95	79
Survey	97	NA	NA	*	NA	NA	NA	91	NA	88	NA	NA

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

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

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

## Description:

- 2002: Estimate based on interpolation between coverage reported by national government. Survey results ignored. Sample size 209 less than 300. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=D+
- 2003: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Unexplained increase from 77 percent to 95 percent with decrease 83 percent. Unexplained temporal change in numerator and denominator levels. GoC=S+ D+
- 2004: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=S+ D+
- 2005: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 95 percent based on 2 survey(s). Swaziland Demographic and Health Survey 2006-07 card or history results of 92 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 84 percent and 3d dose card only coverage of 82 percent. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=S+ D+
- 2006: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. GoC=S+ D+
- 2007: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. GoC=S+ D+
- 2008: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. GoC=S+ D+
- 2009: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Swaziland Multiple Indicator Cluster Survey 2010 card or history results of 91 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 88 percent and 3d dose card only coverage of 84 percent. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2010: Estimate is based on nationally reported data. Estimate challenged by: D-

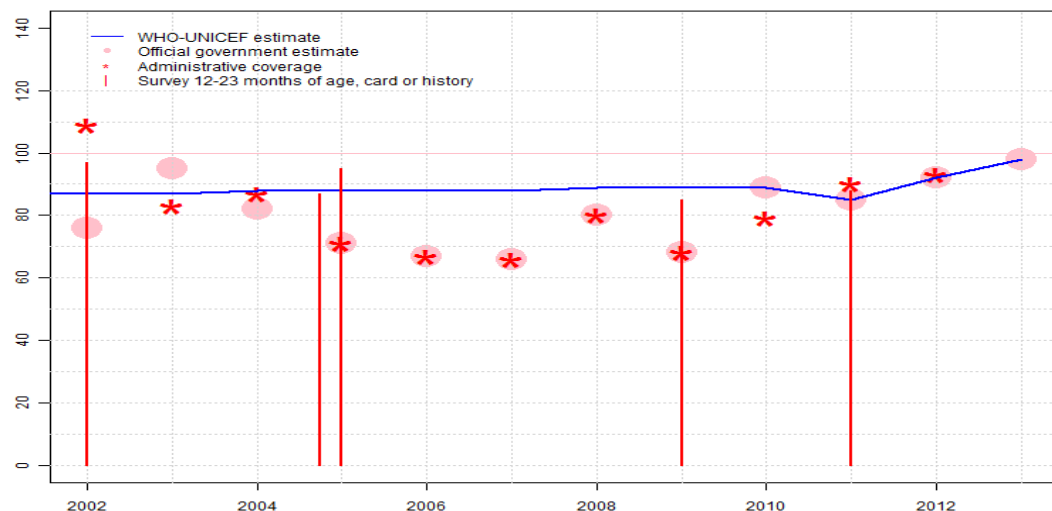
# Swaziland - DTP3

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- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Kingdom of Swaziland Immunization Coverage Survey 2013 Final Report card or history results of 88 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 84 percent and 3d dose card only coverage of 84 percent. 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. Estimate challenged by: D-

# Swaziland - Pol3

SWZ - Pol3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	87	87	88	88	88	88	89	89	89	85	92	98
Estimate GoC	••	•	•	••	•	•	••	•	•••	•••	•••	••
Official	76	95	82	71	67	66	80	68	89	85	92	98
Administrative	109	83	87	71	67	66	80	68	79	90	93	NA
Survey	97	NA	NA	*	NA	NA	NA	85	NA	88	NA	NA

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

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

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

## Description:

- 2002: Estimate based on interpolation between coverage reported by national government. Survey results ignored. Sample size 209 less than 300. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=D+
- 2003: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Unexplained increase from 76 percent to 95 percent with decrease 82 percent. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2004: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2005: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 96 percent based on 2 survey(s). Swaziland Demographic and Health Survey 2006-07 card or history results of 87 percent modified for recall bias to 96 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 84 percent and 3d dose card only coverage of 83 percent. Swaziland measles post campaign evaluation and EPI coverage survey reports, July 2006 card or history results of 95 percent modified for recall bias to 96 percent based on 1st dose card or history coverage of 97 percent, 1st dose card only coverage of 97 percent and 3d dose card only coverage of 96 percent. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. GoC=S+ D+
- 2006: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2007: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2008: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Unexplained increase from 66 percent to 80 percent with decrease 68 percent. GoC=S+ D+
- 2009: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 93 percent based on 1 survey(s). Swaziland Multiple Indicator Cluster Survey 2010 card or history results of 85 percent modified for recall bias to 93 percent based on 1st

dose card or history coverage of 97 percent, 1st dose card only coverage of 87 percent and 3d dose card only coverage of 83 percent. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Decline in reported coverage from 80 percent to 68 percent with increase to 89 percent. Estimate challenged by: D-

2010: Estimate is based on nationally reported data. GoC=R+ S+ D+

2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Kingdom of Swaziland Immunization Coverage Survey 2013 Final Report card or history results of 88 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 84 percent and 3d dose card only coverage of 84 percent. GoC=R+ S+ D+

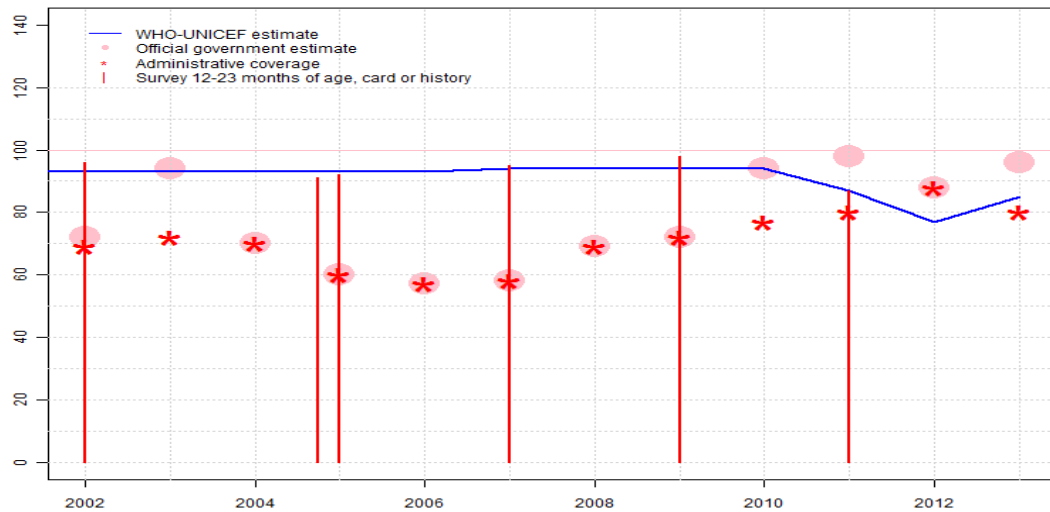
2012: Estimate based on coverage reported by national government. GoC=R+ S+ D+

2013: Estimate based on coverage reported by national government. GoC=R+ S+



# Swaziland - MCV

SWZ - MCV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	93	93	93	93	93	94	94	94	94	87	77	85
Estimate GoC	•	•	•	•	•	•	•	•	•	•	••	•
Official	72	94	70	60	57	58	69	72	94	98	88	96
Administrative	69	72	70	60	57	58	69	72	77	80	88	80
Survey	96	NA	NA	*	NA	95	NA	98	NA	87	NA	NA

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

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

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

## Description:

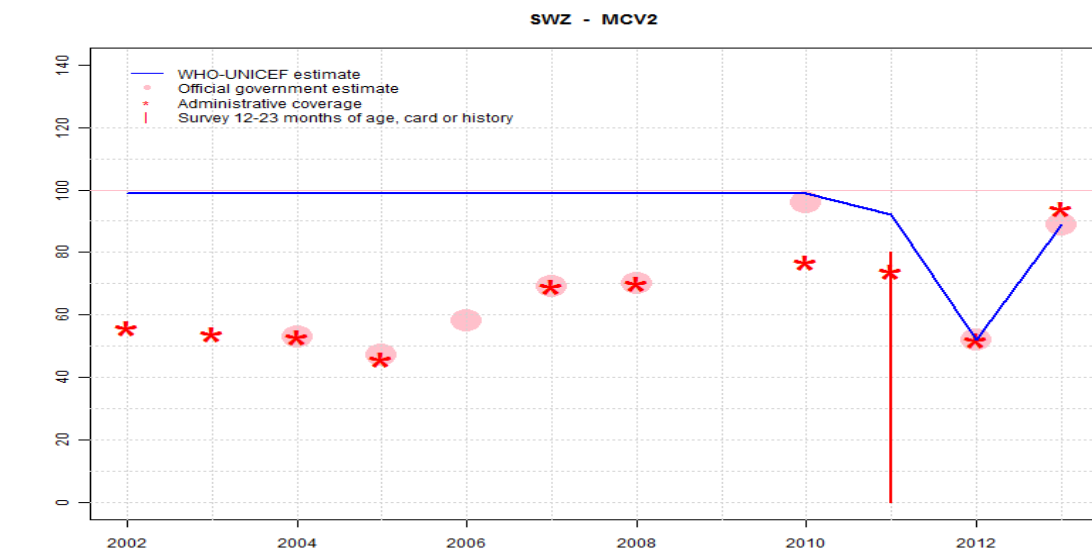
- 2002: Estimate based on interpolation between coverage reported by national government. Survey results ignored. Sample size 209 less than 300. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2003: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Unexplained increase from 72 percent to 94 percent with decrease 70 percent. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2004: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2005: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 92 percent based on 2 survey(s). Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2006: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2007: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 95 percent based on 1 survey(s). Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2008: Estimate based on interpolation between coverage reported by national government. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2009: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 98 percent based on 1 survey(s). Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2010: Estimate is based on nationally reported data. Estimate challenged by: D-
- 2011: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 87 percent based on 1 survey(s). Estimate of 87 percent changed from previous revision value of 98 percent. Estimate challenged by: D-R-
- 2012: Reported data calibrated to 2011 levels. One-month vaccine shortage reported. Estimate of 77 percent changed from previous revision value of 88 percent. GoC=S+ D+

# Swaziland - MCV

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2013: Reported data calibrated to 2011 levels. Estimate challenged by: D-

# Swaziland - MCV2



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	99	99	99	99	99	99	99	99	99	92	52	89
Estimate GoC	•	•	•	•	•	•	•	•	•	•	•	•
Official	NA	NA	53	47	58	69	70	NA	96	NA	52	89
Administrative	56	54	53	46	NA	69	70	NA	77	74	52	94
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	80	NA	NA

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

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

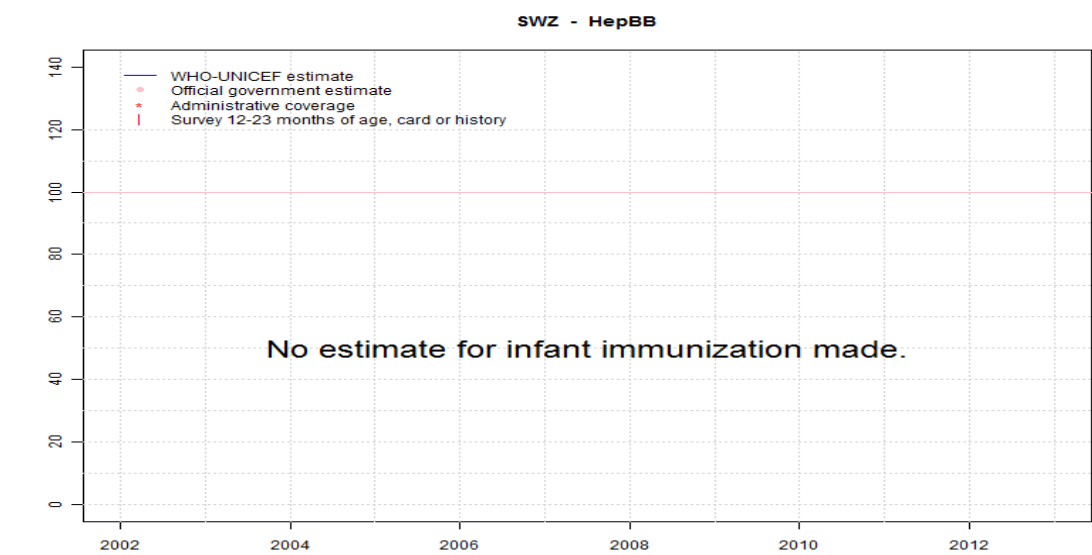
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

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

- 2002: Reported data calibrated to 2011 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2003: Reported data calibrated to 2011 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2004: Reported data calibrated to 2011 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2005: Reported data calibrated to 2011 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2006: Reported data calibrated to 2011 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. GoC=No accepted empirical data
- 2007: Reported data calibrated to 2011 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2008: Reported data calibrated to 2011 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2009: Reported data calibrated to 2011 levels. GoC=No accepted empirical data
- 2010: Reported data calibrated to 2011 levels. Estimate challenged by: D-
- 2011: Estimate based on MCV first dose adjustment factor Estimate challenged by: D-R-
- 2012: Estimate is based on reported data. One-month vaccine shortage reported. Reported data excluded. Decline in reported coverage from 74 percent to 52 percent with increase to 89 percent. Estimate challenged by: D-R-
- 2013: Estimate based on reported data. No stock out reported. Reported data excluded. Change in reported coverage from 52 level to 89 percent. Estimate challenged by: D-R-

# Swaziland - HepBB



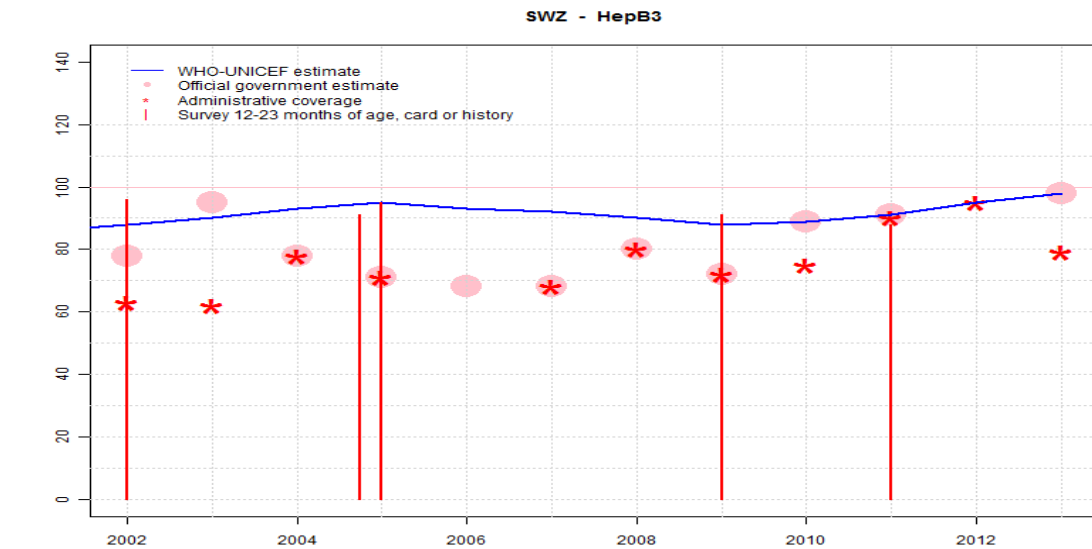
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

# Swaziland - HepB3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	88	90	93	95	93	92	90	88	89	91	95	98
Estimate GoC	•	•	•	•	••	•	••	•	•	•••	•••	•
Official	78	95	78	71	68	68	80	72	89	91	NA	98
Administrative	63	62	78	71	NA	68	80	72	75	90	95	79
Survey	96	NA	NA	*	NA	NA	NA	91	NA	88	NA	NA

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

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

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

## Description:

- 2002: Reported data calibrated to 1997 and 2005 levels. Survey results ignored. Sample size 209 less than 300. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2003: Reported data calibrated to 1997 and 2005 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Reported data excluded. Unexplained increase from 78 percent to 95 percent with decrease 78 percent. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2004: Reported data calibrated to 1997 and 2005 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-
- 2005: Survey evidence does not support reported data. Estimate based on survey results. Survey evidence of 95 percent based on 2 survey(s). Swaziland Demographic and Health Survey 2006-07 card or history results of 91 percent modified for recall bias to 95 percent based on 1st dose card or history coverage of 96 percent, 1st dose card only coverage of 83 percent and 3d dose card only coverage of 82 percent. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Unexplained temporal change in numerator and denominator levels. Estimate challenged by: D-R-
- 2006: Reported data calibrated to 2005 and 2009 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. GoC=S+
- 2007: Reported data calibrated to 2005 and 2009 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2008: Reported data calibrated to 2005 and 2009 levels. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. GoC=S+ D+
- 2009: Estimate based on interpolation between data reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Swaziland Multiple Indicator Cluster Survey 2010 card or history results of 91 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 88 percent and 3d dose card only coverage of 84 percent. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2010: Estimate is based on nationally reported data. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Kingdom of Swaziland Immunization Coverage Survey 2013 Final Report card or history results of 88 percent modified for recall bias to 89 percent based on

# Swaziland - HepB3

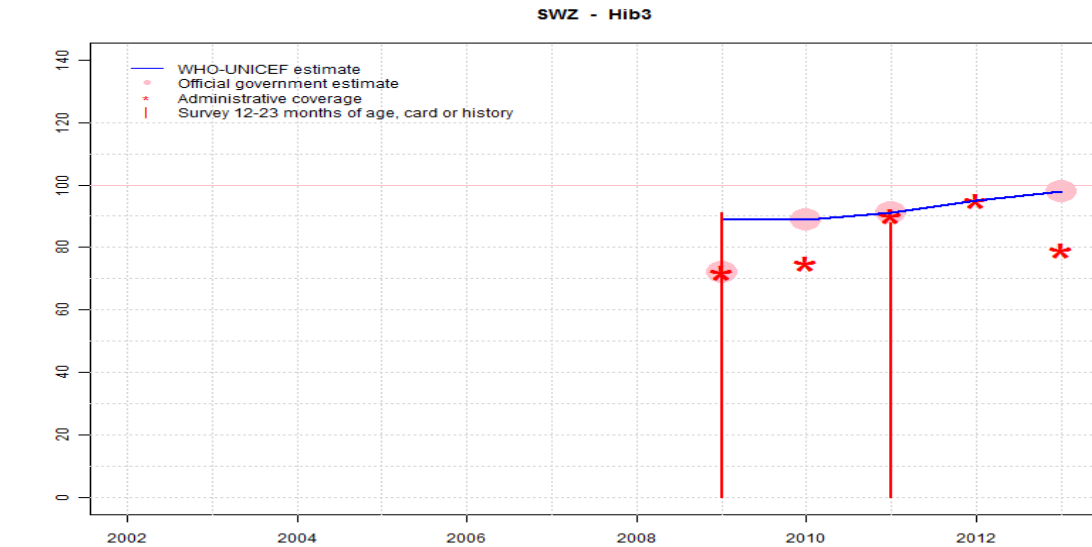
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1st dose card or history coverage of 89 percent, 1st dose card only coverage of 84 percent and 3d dose card only coverage of 84 percent. GoC=R+ S+ D+

2012: Estimate based on reported administrative data. GoC=R+ S+ D+

2013: Estimate based on coverage reported by national government. Estimate challenged by: D-

# Swaziland - Hib3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	89	89	91	95	98
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	•	•	•••	•••	•
Official	NA	NA	NA	NA	NA	NA	NA	72	89	91	NA	98
Administrative	NA	NA	NA	NA	NA	NA	NA	72	75	90	95	79
Survey	NA	NA	NA	NA	NA	NA	NA	91	NA	88	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.

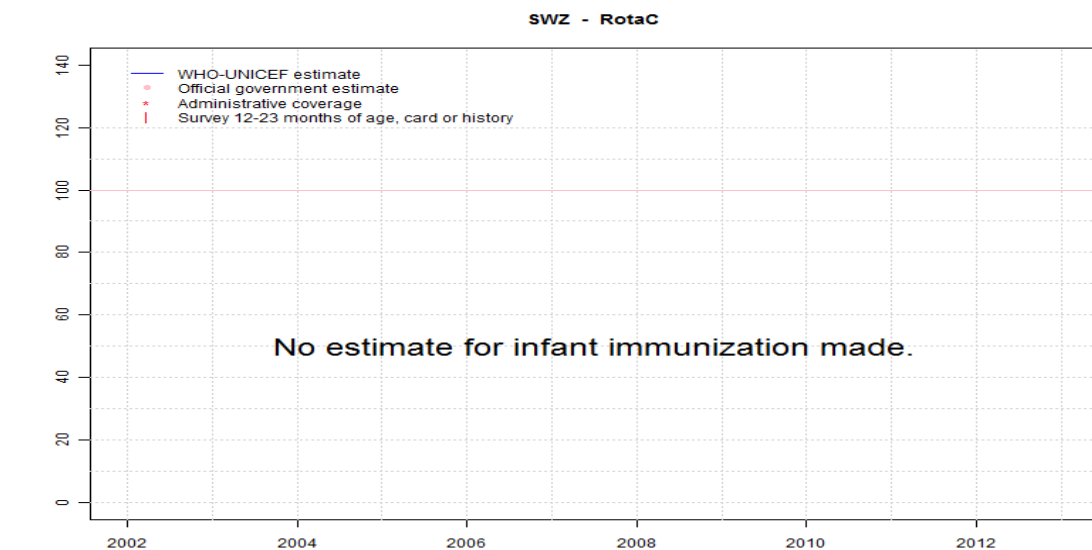
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2009: Estimate based on extrapolation from data reported by national government supported by survey. Survey evidence of 94 percent based on 1 survey(s). Swaziland Multiple Indicator Cluster Survey 2010 card or history results of 91 percent modified for recall bias to 94 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 88 percent and 3d dose card only coverage of 84 percent. Reported data excluded. Fluctuating and inconsistent data suggest poor reporting. Estimate challenged by: D-
- 2010: Estimate is based on nationally reported data. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government supported by survey. Survey evidence of 89 percent based on 1 survey(s). Kingdom of Swaziland Immunization Coverage Survey 2013 Final Report card or history results of 88 percent modified for recall bias to 89 percent based on 1st dose card or history coverage of 89 percent, 1st dose card only coverage of 84 percent and 3d dose card only coverage of 84 percent. GoC=R+ S+ D+
- 2012: Estimate based on reported administrative data. GoC=R+ S+ D+
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-

# Swaziland - RotaC



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

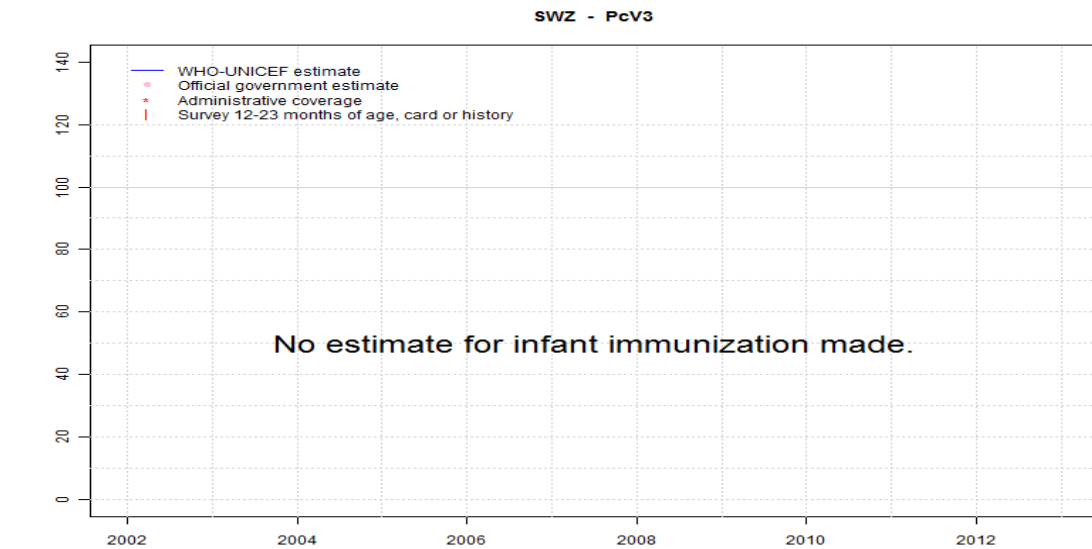
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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



# Swaziland - PcV3



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

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

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

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

# Swaziland - survey details

## 2011 Kingdom of Swaziland Immunization Coverage Survey 2013 Final Report

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	84	24-35 m	-	85
BCG	Card or History	91	24-35 m	482	85
DTP1	Card	84	24-35 m	-	85
DTP1	Card or History	89	24-35 m	482	85
DTP3	Card	84	24-35 m	-	85
DTP3	Card or History	88	24-35 m	482	85
HepB1	Card	84	24-35 m	-	85
HepB1	Card or History	89	24-35 m	482	85
HepB3	Card	84	24-35 m	-	85
HepB3	Card or History	88	24-35 m	482	85
Hib1	Card	84	24-35 m	-	85
Hib1	Card or History	89	24-35 m	482	85
Hib3	Card	84	24-35 m	-	85
Hib3	Card or History	88	24-35 m	482	85
MCV	Card	82	24-35 m	-	85
MCV	Card or History	87	24-35 m	482	85
MCV2	Card	76	24-35 m	-	85
MCV2	Card or History	80	24-35 m	482	85
Pol1	Card	84	24-35 m	-	85
Pol1	Card or History	89	24-35 m	482	85
Pol3	Card	84	24-35 m	-	85
Pol3	Card or History	88	24-35 m	482	85

## 2009 Swaziland Multiple Indicator Cluster Survey 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	98	12-23 m	521	88
BCG	Card	88	12-23 m	521	88
BCG	Card or History	98	12-23 m	521	88
BCG	History	11	12-23 m	521	88
DTP1	C or H <12 months	96	12-23 m	521	88
DTP1	Card	88	12-23 m	521	88
DTP1	Card or History	98	12-23 m	521	88
DTP1	History	10	12-23 m	521	88

DTP3	C or H <12 months	89	12-23 m	521	88
DTP3	Card	84	12-23 m	521	88
DTP3	Card or History	91	12-23 m	521	88
DTP3	History	6	12-23 m	521	88
HepB1	C or H <12 months	96	12-23 m	521	88
HepB1	Card	88	12-23 m	521	88
HepB1	Card or History	98	12-23 m	521	88
HepB1	History	10	12-23 m	521	88
HepB3	C or H <12 months	89	12-23 m	521	88
HepB3	Card	84	12-23 m	521	88
HepB3	Card or History	91	12-23 m	521	88
HepB3	History	6	12-23 m	521	88
Hib1	C or H <12 months	96	12-23 m	521	88
Hib1	Card	88	12-23 m	521	88
Hib1	Card or History	98	12-23 m	521	88
Hib1	History	10	12-23 m	521	88
Hib3	C or H <12 months	89	12-23 m	521	88
Hib3	Card	84	12-23 m	521	88
Hib3	Card or History	91	12-23 m	521	88
Hib3	History	6	12-23 m	521	88
MCV	C or H <12 months	94	12-23 m	521	88
MCV	Card	85	12-23 m	521	88
MCV	Card or History	98	12-23 m	521	88
MCV	History	13	12-23 m	521	88
Pol1	C or H <12 months	96	12-23 m	521	88
Pol1	Card	87	12-23 m	521	88
Pol1	Card or History	97	12-23 m	521	88
Pol1	History	10	12-23 m	521	88
Pol3	C or H <12 months	84	12-23 m	521	88
Pol3	Card	83	12-23 m	521	88
Pol3	Card or History	85	12-23 m	521	88
Pol3	History	2	12-23 m	521	88

## 2008 Swaziland 2008 National Nutrition Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV	C or H <12 months	72	9-11 m	-	-
MCV	Card <12 months	64	9-11 m	-	-
MCV	History <12 months	8	9-11 m	-	-

# Swaziland - survey details

## 2007 Swaziland 2008 National Nutrition Survey

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
MCV	Card	84	12-23 m	754	-
MCV	Card or History	95	12-23 m	754	-
MCV	History	11	12-23 m	754	-

## 2005 Swaziland Demographic and Health Survey 2006-07

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	97	12-23 m	531	84
BCG	Card	84	12-23 m	531	84
BCG	Card or History	97	12-23 m	531	84
BCG	History	13	12-23 m	531	84
DTP1	C or H <12 months	95	12-23 m	531	84
DTP1	Card	84	12-23 m	531	84
DTP1	Card or History	96	12-23 m	531	84
DTP1	History	12	12-23 m	531	84
DTP3	C or H <12 months	90	12-23 m	531	84
DTP3	Card	82	12-23 m	531	84
DTP3	Card or History	92	12-23 m	531	84
DTP3	History	9	12-23 m	531	84
HepB1	C or H <12 months	95	12-23 m	531	84
HepB1	Card	83	12-23 m	531	84
HepB1	Card or History	96	12-23 m	531	84
HepB1	History	12	12-23 m	531	84
HepB3	C or H <12 months	90	12-23 m	531	84
HepB3	Card	82	12-23 m	531	84
HepB3	Card or History	91	12-23 m	531	84
HepB3	History	9	12-23 m	531	84
MCV	C or H <12 months	83	12-23 m	531	84
MCV	Card	79	12-23 m	531	84
MCV	Card or History	92	12-23 m	531	84
MCV	History	12	12-23 m	531	84
Pol1	C or H <12 months	96	12-23 m	531	84
Pol1	Card	84	12-23 m	531	84

Pol1	Card or History	97	12-23 m	531	84
Pol1	History	13	12-23 m	531	84
Pol3	C or H <12 months	86	12-23 m	531	84
Pol3	Card	83	12-23 m	531	84
Pol3	Card or History	87	12-23 m	531	84
Pol3	History	4	12-23 m	531	84

## 2005 Swaziland measles post campaign evaluation and EPI coverage survey reports, July 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card	100	12-23 m	581	79
BCG	Card or History	100	12-23 m	581	79
DTP1	Card	98	12-23 m	581	79
DTP1	Card or History	97	12-23 m	581	79
DTP3	Card	96	12-23 m	581	79
DTP3	Card or History	95	12-23 m	581	79
HepB1	Card	98	12-23 m	581	79
HepB1	Card or History	97	12-23 m	581	79
HepB3	Card	96	12-23 m	581	79
HepB3	Card or History	95	12-23 m	581	79
MCV	Card	89	12-23 m	581	79
MCV	Card or History	91	12-23 m	581	79
Pol1	Card	97	12-23 m	581	79
Pol1	Card or History	97	12-23 m	581	79
Pol3	Card	96	12-23 m	581	79
Pol3	Card or History	95	12-23 m	581	79

## 2002 Swaziland, Report on National EPI Review, 2003

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	Card or History	98	12-23 m	209	94
DTP1	Card or History	98	12-23 m	209	94
DTP3	Card or History	97	12-23 m	209	94
HepB3	Card or History	96	12-23 m	209	94
MCV	Card or History	96	12-23 m	209	94
Pol3	Card or History	97	12-23 m	209	94

# Swaziland - survey details

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1999 Swaziland Multiple Indicator Cluster Survey 2000, 2002

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
BCG	C or H <12 months	94	12-23 m	-	86
DTP1	C or H <12 months	93	12-23 m	-	86

DTP3	C or H <12 months	78	12-23 m	-	86
MCV	C or H <12 months	72	12-23 m	-	86
Pol1	C or H <12 months	91	12-23 m	-	86
Pol3	C or H <12 months	75	12-23 m	-	86

Further information and estimates prior to 2002 are available at:

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

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

## Swaziland

### 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 receive 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.

Year	PAB coverage estimate (%)
2002	81
2003	81
2004	82
2005	82
2006	85
2007	85
2008	86
2009	86
2010	86
2011	86
2012	86
2013	86

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<sup>1</sup> 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.