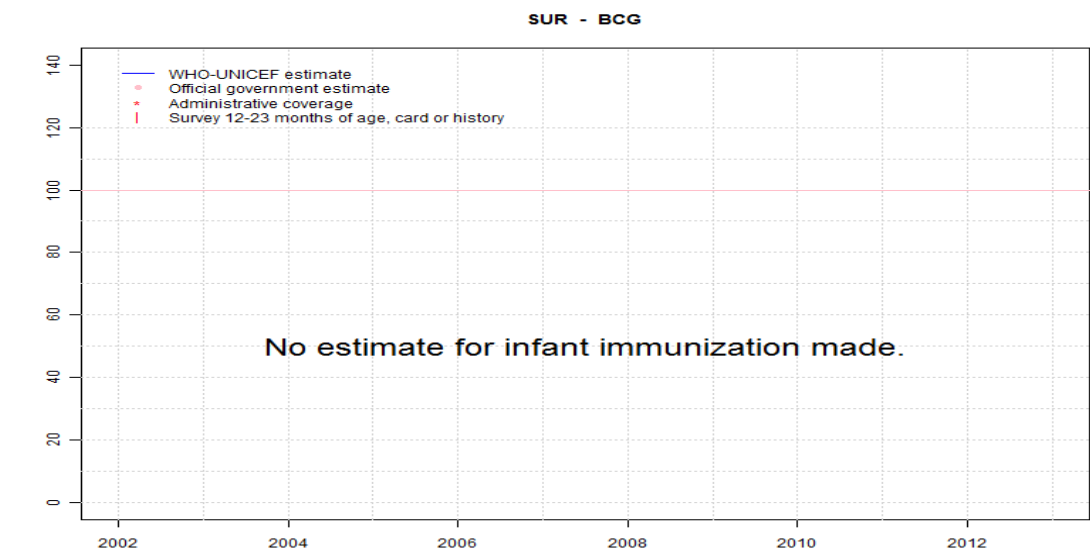


# Suriname - BCG



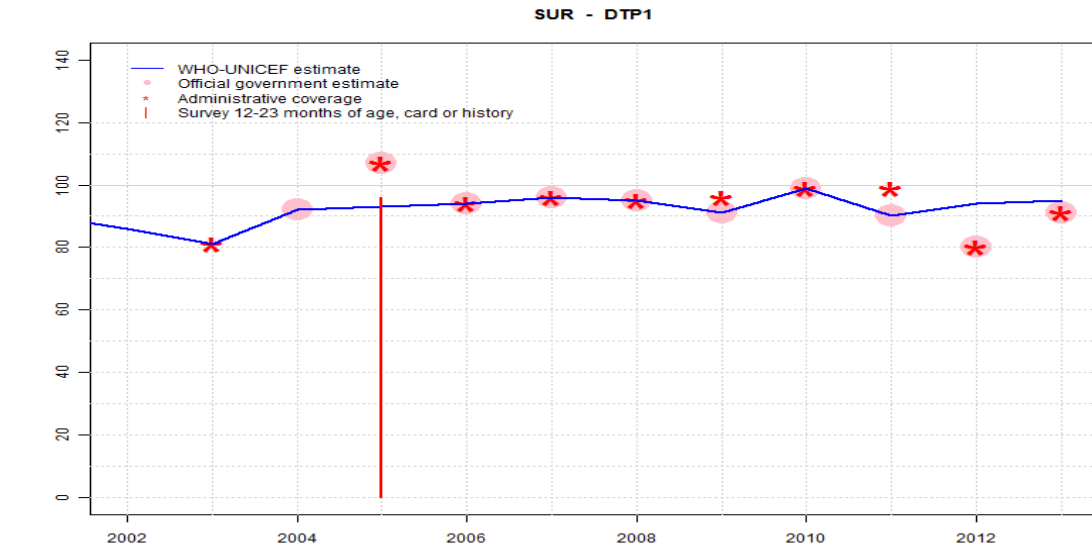
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

# Suriname - DTP1



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	86	81	92	93	94	96	95	91	99	90	94	95
Estimate GoC	•	•	•	•	•	•	••	•	••	•	•	•
Official	NA	NA	92	107	94	96	95	91	99	90	80	91
Administrative	NA	81	NA	107	94	96	95	96	99	99	80	91
Survey	NA	NA	NA	96	NA	NA	NA	NA	NA	NA	NA	NA

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

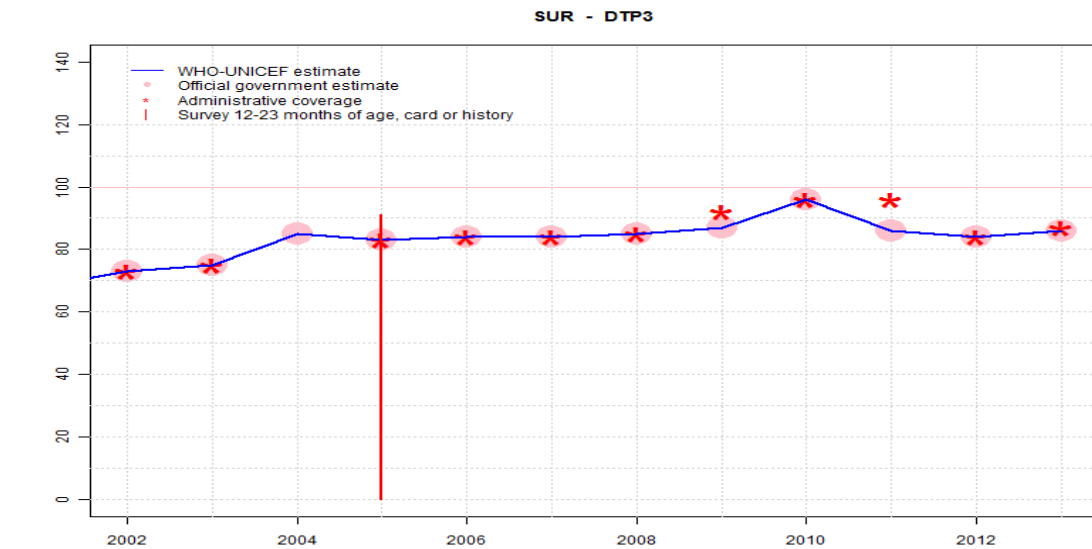
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

## Description:

- 2002: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2003: Estimate based on reported administrative data. Estimate challenged by: S-
- 2004: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2005: Estimate based on interpolation between data reported by national government. Suriname Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey conducted for year of pentavalent introduction. Reported data excluded. 107 percent greater than 100 percent. Reported data excluded. Unexplained increase from 92 percent to 107 percent with decrease 94 percent. Estimate challenged by: S-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2008: Estimate based on coverage reported by national government. GoC=R+D+
- 2009: Estimate based on coverage reported by national government. Survey results for DTP1 are not presented due to transitions to DTP-HepB-Hib vaccine during period covered by survey. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. GoC=R+D+
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: DTP1 coverage estimated based on DTP3 coverage of 84. Estimate challenged by: D-R-
- 2013: DTP1 coverage estimated based on DTP3 coverage of 86. Reported data excluded. Change in reported coverage from 80 level to 91 percent. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Estimate challenged by: R-

# Suriname - DTP3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	73	75	85	83	84	84	85	87	96	86	84	86
Estimate GoC	••	•	•	•	•	•	••	••	••	•	••	••
Official	73	75	85	83	84	84	85	87	96	86	84	86
Administrative	73	75	NA	83	84	84	85	92	96	96	84	87
Survey	NA	NA	NA	91	NA	NA	NA	NA	NA	NA	NA	NA

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

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

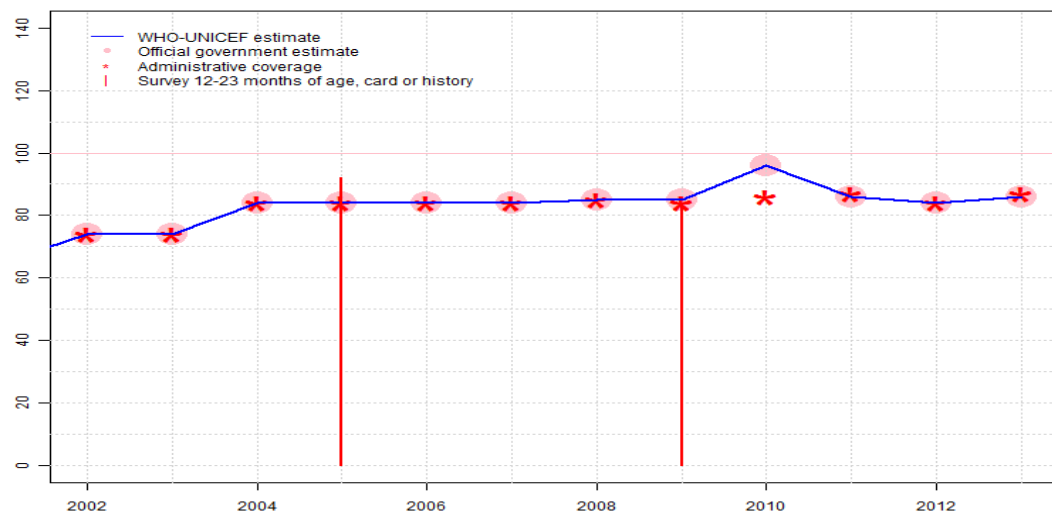
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2004: Estimate follows reported data. Estimate challenged by: S-
- 2005: Estimate based on coverage reported by national government. Suriname Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey conducted for year of pentavalent introduction. Suriname Multiple Indicator Cluster Survey 2006 card or history results of 91 percent modified for recall bias to 96 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 84 percent. Estimate challenged by: S-
- 2006: Estimate follows reported data. Estimate challenged by: S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Survey results for DTP3 are not presented due to transitions to DTP-HepB-Hib vaccine during period covered by survey. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

# Suriname - Pol3

SUR - Pol3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	74	74	84	84	84	84	85	85	96	86	84	86
Estimate GoC	••	•	•	•	•	•	•••	•••	•••	•••	••	••
Official	74	74	84	84	84	84	85	85	96	86	84	86
Administrative	74	74	84	84	84	84	85	84	86	87	84	87
Survey	NA	NA	NA	92	NA	NA	NA	83	NA	NA	NA	NA

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

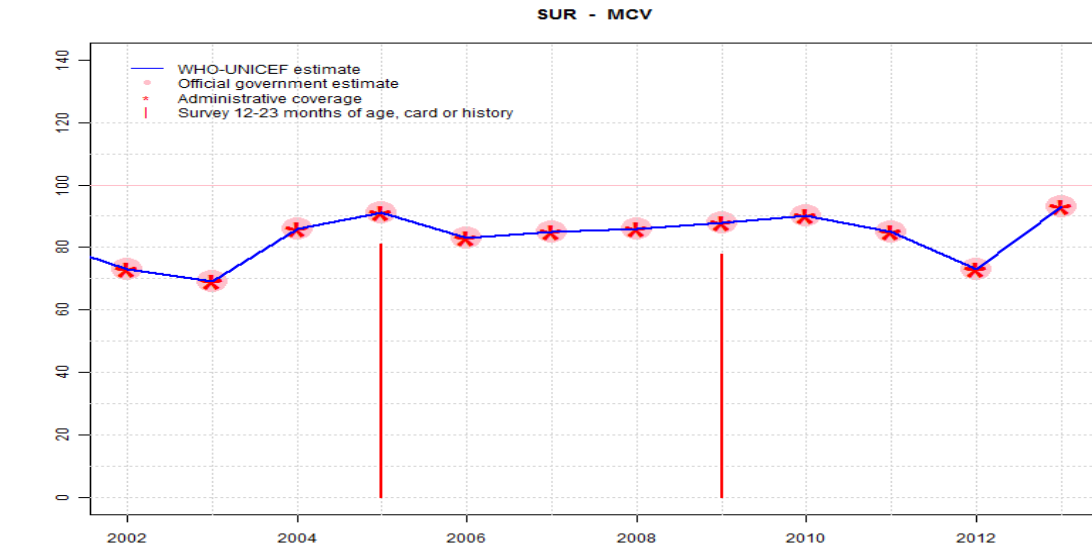
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

## Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2004: Estimate follows reported data. . Estimate challenged by: S-
- 2005: Estimate based on coverage reported by national government. Suriname Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey conducted for year of pentavalent introduction. Suriname Multiple Indicator Cluster Survey 2006 card or history results of 92 percent modified for recall bias to 97 percent based on 1st dose card or history coverage of 98 percent, 1st dose card only coverage of 84 percent and 3d dose card only coverage of 83 percent. Estimate challenged by: S-
- 2006: Estimate follows reported data. Estimate challenged by: S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government supported by survey. Survey evidence of 87 percent based on 1 survey(s). Suriname Multiple Indicator Cluster Survey 2010 card or history results of 83 percent modified for recall bias to 87 percent based on 1st dose card or history coverage of 90 percent, 1st dose card only coverage of 80 percent and 3d dose card only coverage of 77 percent. GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. 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. One month vaccine shortage. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

# Suriname - MCV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	73	69	86	91	83	85	86	88	90	85	73	93
Estimate GoC	••	•	•	•	•	•	•••	•••	••	•••	••	••
Official	73	69	86	91	83	85	86	88	90	85	73	93
Administrative	73	69	86	91	83	85	86	88	90	85	73	93
Survey	NA	NA	NA	81	NA	NA	NA	78	NA	NA	NA	NA

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

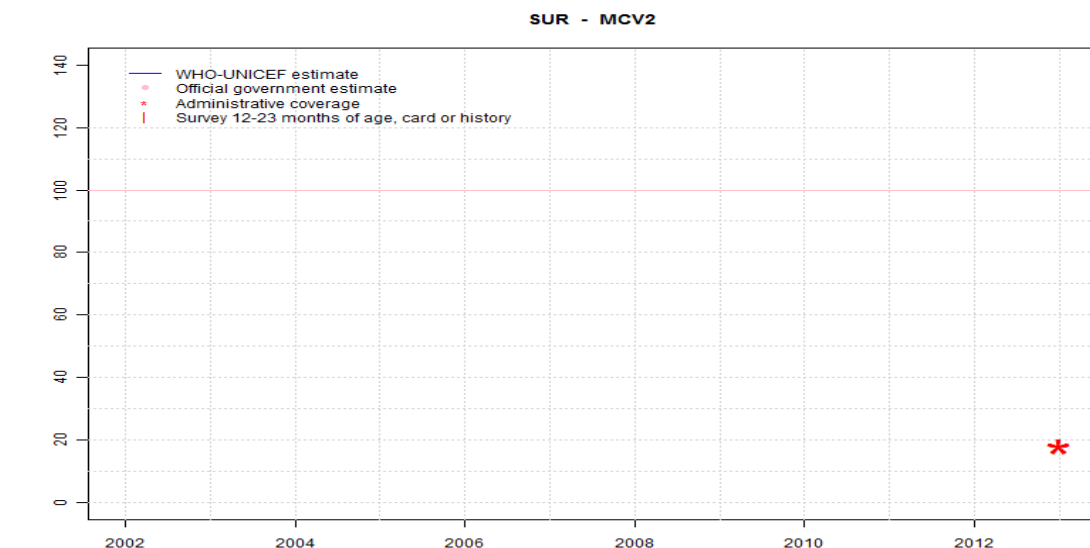
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

## Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2004: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2005: Estimate based on coverage reported by national government. Suriname Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey conducted for year of pentavalent introduction. Reported coverage includes doses administered during campaign. Estimate challenged by: D-S-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2008: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2009: Estimate based on coverage reported by national government supported by survey. Survey evidence of 78 percent based on 1 survey(s). GoC=R+ S+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ S+ D+
- 2012: Estimate based on coverage reported by national government. One month vaccine shortage. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Increase in coverage reflects recovery from prior years stockout in spite of 2 month stockout during 2013 at national level and in 2 districts. GoC=R+ D+

# Suriname - MCV2



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18
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	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

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

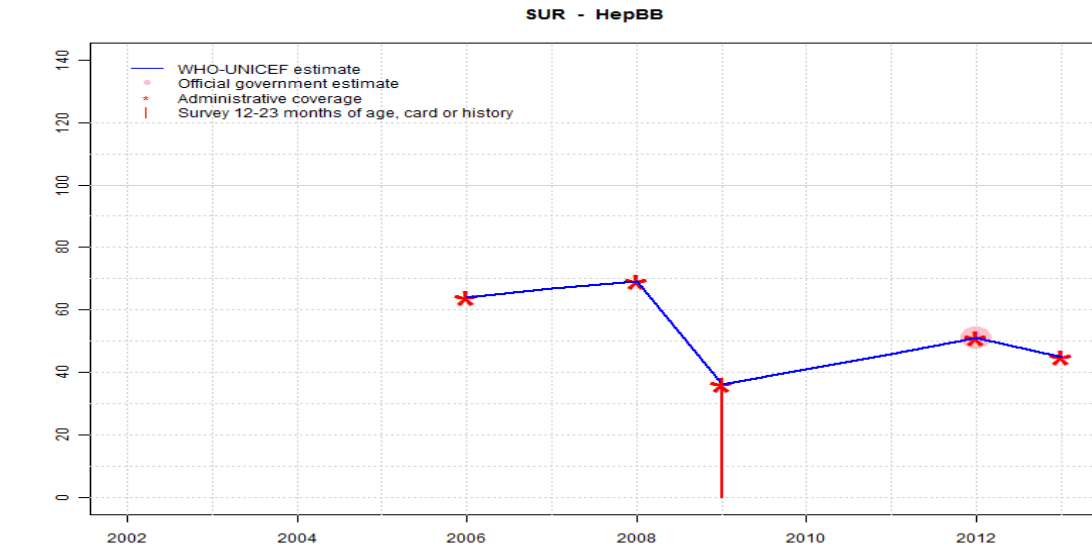
## Description:

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

2013: Estimate based on reported administrative estimate. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Second dose of MCV introduced during 2005 but not systematically provided until 2013. Reporting started in 2013. Presentation is MMR and is recommended at 4 years of age. GoC=R+ D+



# Suriname - HepBB



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	64	67	69	36	41	46	51	45
Estimate GoC	NA	NA	NA	NA	••	•	••	•••	••	••	••	••
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	51	NA
Administrative	NA	NA	NA	NA	64	NA	69	36	NA	NA	51	45
Survey	NA	NA	NA	NA	NA	NA	NA	38	NA	NA	NA	NA

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

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

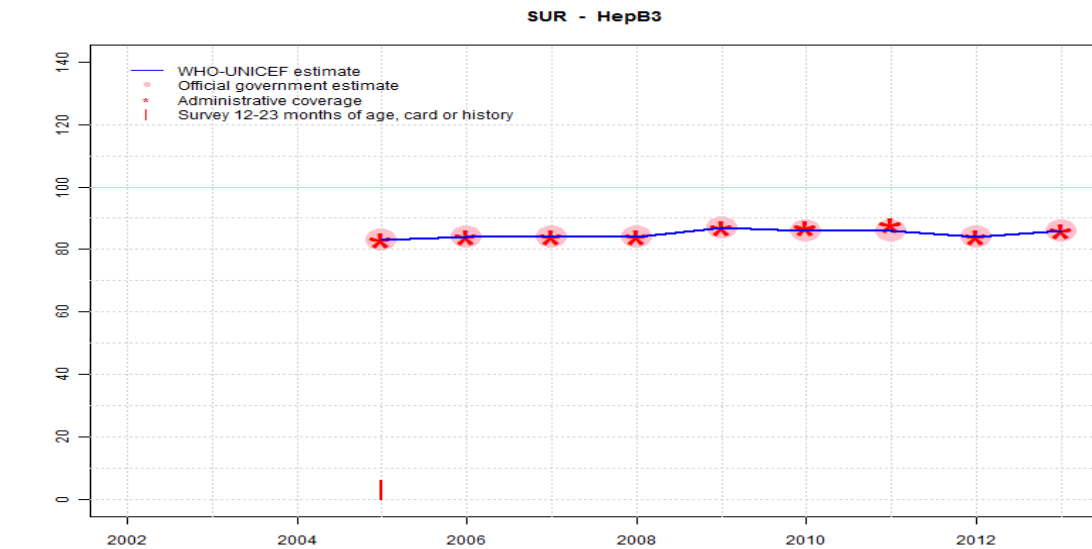
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2006: Estimate based on reported data. GoC=R+ D+
- 2007: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2008: Estimate based on reported data. GoC=R+ D+
- 2009: Estimate based on administrative data reported by national government supported by survey. Survey evidence of 38 percent based on 1 survey(s). GoC=R+ S+ D+
- 2010: Estimate based on interpolation between data reported by national government. GoC=S+
- 2011: Estimate based on interpolation between data reported by national government. GoC=S+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on reported administrative data. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+



# Suriname - HepB3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	83	84	84	84	87	86	86	84	86
Estimate GoC	NA	NA	NA	•	•	•	••	••	••	••	••	••
Official	NA	NA	NA	83	84	84	84	87	86	86	84	86
Administrative	NA	NA	NA	83	84	84	84	87	87	88	84	86
Survey	NA	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA

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

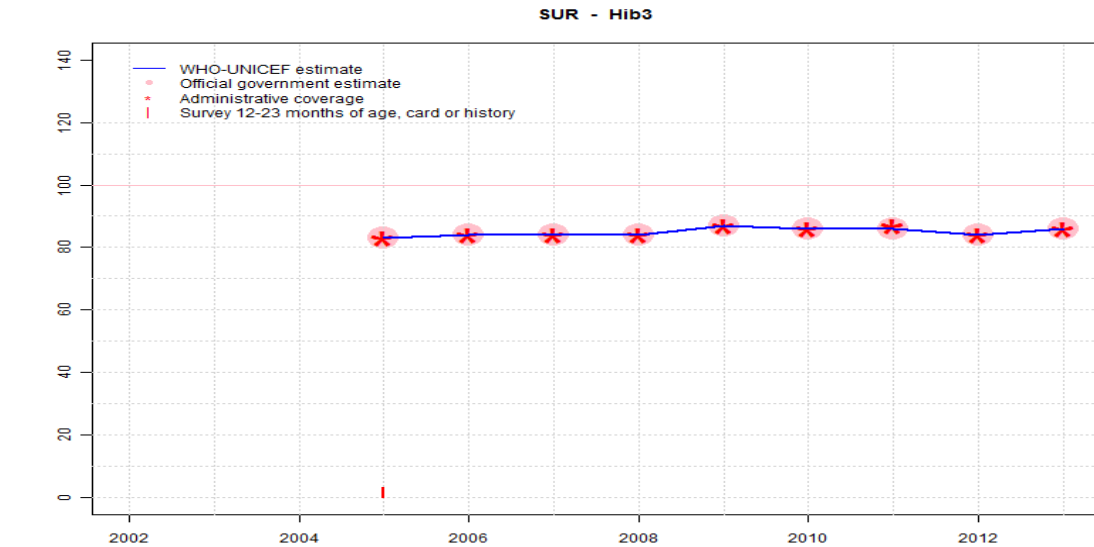
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

## Description:

- 2005: Estimate based on coverage reported by national government. Suriname Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey conducted for year of pentavalent introduction. HepB vaccination introduced in 2003 sub-nationally. Reporting started in 2005, after general introduction of HepB nationwide. Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: D-S-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Survey results for HepB3 are not presented due to transitions to DTP-HepB-Hib vaccine during period covered by survey. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

# Suriname - Hib3



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	83	84	84	84	87	86	86	84	86
Estimate GoC	NA	NA	NA	•	•	•	••	••	••	••	••	••
Official	NA	NA	NA	83	84	84	84	87	86	86	84	86
Administrative	NA	NA	NA	83	84	84	84	87	86	87	84	86
Survey	NA	NA	NA	3	NA	NA	NA	NA	NA	NA	NA	NA

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

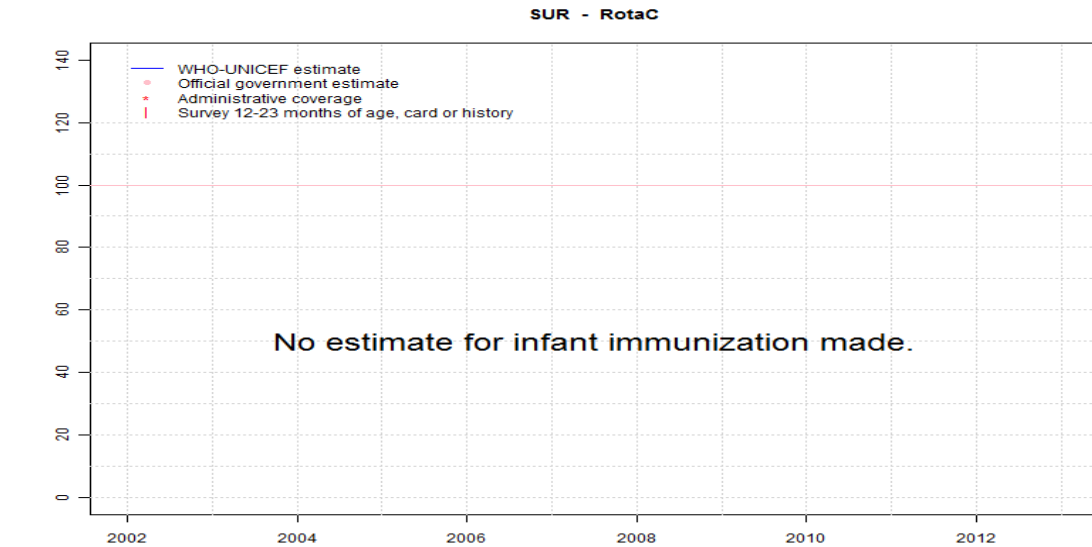
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

## Description:

- 2005: Estimate based on coverage reported by national government. Suriname Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey conducted for year of pentavalent introduction. Hib vaccination introduced in 2003 sub-nationally. Reporting started in 2005, after general introduction of HepB nationwide. Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: D-S-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2007: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2008: Estimate based on coverage reported by national government. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. Survey results for Hib3 are not presented due to transitions to DTP-HepB-Hib vaccine during period covered by survey. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. GoC=R+ D+

# Suriname - RotaC

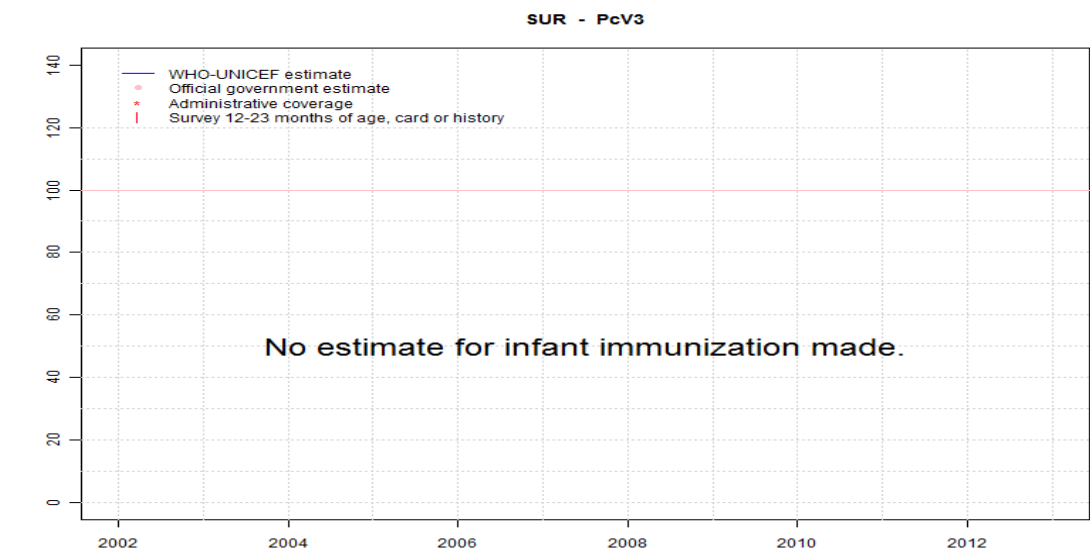


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.



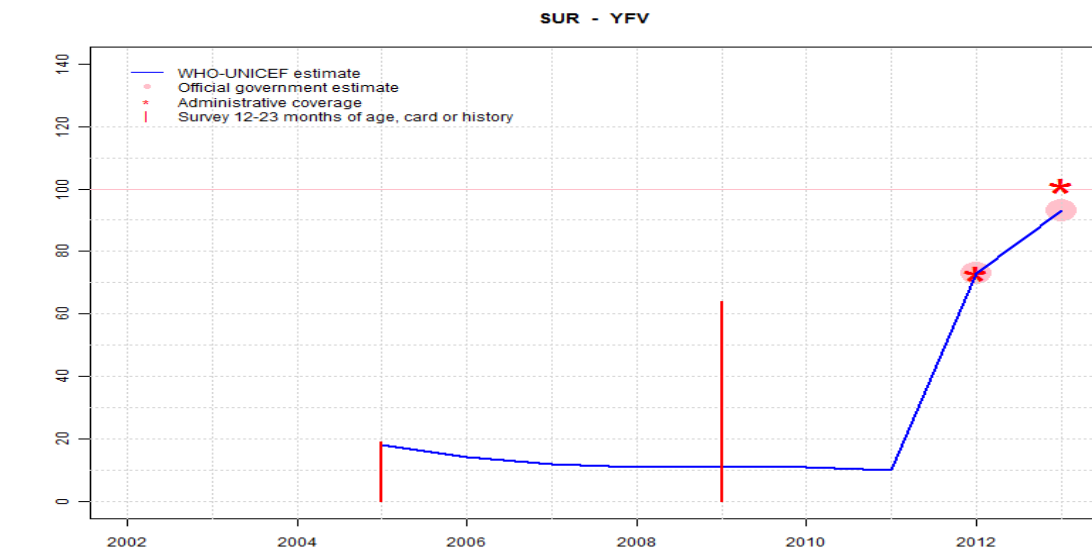
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimate GoC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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.

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- 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.

# Suriname - YFV



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estimate	NA	NA	NA	18	14	12	11	11	11	10	73	93
Estimate GoC	NA	NA	NA	•	•	•	••	•	••	••	••	••
Official	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	73	93
Administrative	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	73	101
Survey	NA	NA	NA	19	NA	NA	NA	64	NA	NA	NA	NA

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

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

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

## Description:

- 2005: YFV introduced in 2005 for high-risk areas only. Ninety-seven percent coverage was achieved in 18 percent of the national target population. Suriname Multiple Indicator Cluster Survey 2006 results ignored by working group. Survey conducted for year of pentavalent introduction. YFV partially introduced in 2004. Reporting started in 2005. Estimate challenged by: S-
- 2006: YFV introduced in 2005 for high-risk areas only. Eighty percent coverage was achieved in 17 percent of the national target population. Estimate challenged by: S-
- 2007: YFV introduced in 2005 for high-risk areas only. Eighty-two percent coverage was achieved in 15 percent of the national target population. Estimate challenged by: S-
- 2008: YFV introduced in 2005 for high-risk areas only. Seventy-one percent coverage was achieved in 16 percent of the national target population. GoC=D+
- 2009: Estimate extrapolated from 2008 estimate. No reported data provided. Survey results ignored. Sample size 154 less than 300. GoC=No accepted empirical data
- 2010: YFV introduced in 2005 for high-risk areas only. Eighty percent coverage was achieved in 14 percent of the national target population. GoC=D+
- 2011: YFV introduced in 2005 for high-risk areas only. Seventy-seven percent coverage was achieved in 13 percent of the national target population. GoC=D+
- 2012: Estimate based on coverage reported by national government. Yellow fever vaccine is now offered to the entire national target population. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Increase reflects expansion of service delivery following introduction to national birth cohort in 2012. GoC=R+ D+

# Suriname - survey details

## 2009 Suriname Multiple Indicator Cluster Survey 2010

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
HepBB	C or H <12 months	38	18-29 m	-	82
HepBB	Card	33	18-29 m	-	82
HepBB	Card or History	38	18-29 m	746	82
HepBB	History	6	18-29 m	-	82
MCV	C or H <18 months	74	18-29 m	-	82
MCV	Card	70	18-29 m	-	82
MCV	Card or History	78	18-29 m	746	82
MCV	History	7	18-29 m	-	82
Pol1	C or H <12 months	90	18-29 m	-	82
Pol1	Card	80	18-29 m	-	82
Pol1	Card or History	90	18-29 m	746	82
Pol1	History	10	18-29 m	-	82
Pol3	C or H <12 months	79	18-29 m	-	82
Pol3	Card	77	18-29 m	-	82
Pol3	Card or History	83	18-29 m	746	82
Pol3	History	6	18-29 m	-	82
YFV	C or H <12 months	15	18-29 m	-	82
YFV	Card	59	18-29 m	-	82
YFV	Card or History	64	18-29 m	154	82
YFV	History	5	18-29 m	-	82

## 2005 Suriname Multiple Indicator Cluster Survey 2006

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP1	C or H <12 months	95	12-23 m	412	81
DTP1	Card	84	12-23 m	412	81
DTP1	Card or History	96	12-23 m	412	81
DTP1	History	12	12-23 m	412	81
DTP3	C or H <12 months	86	12-23 m	412	81
DTP3	Card	84	12-23 m	412	81
DTP3	Card or History	91	12-23 m	412	81
DTP3	History	7	12-23 m	412	81
HepB1	C or H <12 months	9	12-23 m	412	81
HepB1	Card	9	12-23 m	412	81
HepB1	Card or History	9	12-23 m	412	81

HepB1	History	0	12-23 m	412	81
HepB3	C or H <12 months	3	12-23 m	412	81
HepB3	Card	6	12-23 m	412	81
HepB3	Card or History	6	12-23 m	412	81
HepB3	History	0	12-23 m	412	81
Hib1	C or H <12 months	4	12-23 m	412	81
Hib1	Card	4	12-23 m	412	81
Hib1	Card or History	4	12-23 m	412	81
Hib1	History	0	12-23 m	412	81
Hib3	C or H <12 months	3	12-23 m	412	81
Hib3	Card	3	12-23 m	412	81
Hib3	Card or History	3	12-23 m	412	81
Hib3	History	0	12-23 m	412	81
MCV	C or H <12 months	80	12-23 m	412	81
MCV	Card	66	12-23 m	412	81
MCV	Card or History	81	12-23 m	412	81
MCV	History	15	12-23 m	412	81
Pol1	C or H <12 months	97	12-23 m	412	81
Pol1	Card	84	12-23 m	412	81
Pol1	Card or History	98	12-23 m	412	81
Pol1	History	14	12-23 m	412	81
Pol3	C or H <12 months	88	12-23 m	412	81
Pol3	Card	83	12-23 m	412	81
Pol3	Card or History	92	12-23 m	412	81
Pol3	History	9	12-23 m	412	81
YFV	C or H <12 months	18	12-23 m	412	81
YFV	Card	12	12-23 m	412	81
YFV	Card or History	19	12-23 m	412	81
YFV	History	7	12-23 m	412	81

## 1999 Suriname Multiple Indicator Cluster Survey 2000, 2001

Vaccine	Confirmation method	Coverage	Age cohort	Sample	Cards seen
DTP1	Card	84	12-23 m	376	85
DTP1	Card or History	89	12-23 m	376	85
DTP1	History	5	12-23 m	376	85
DTP3	Card	76	12-23 m	376	85
DTP3	Card or History	79	12-23 m	376	85
DTP3	History	3	12-23 m	376	85

## Suriname - survey details

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MCV	Card	56	12-23 m	376	85
MCV	Card or History	60	12-23 m	376	85
MCV	History	5	12-23 m	376	85
Pol1	Card	84	12-23 m	376	85
Pol1	Card or History	88	12-23 m	376	85

Pol1	History	4	12-23 m	376	85
Pol3	Card	76	12-23 m	376	85
Pol3	Card or History	78	12-23 m	376	85
Pol3	History	3	12-23 m	376	85

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)



## Suriname

### 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	92
2003	92
2004	92
2005	92
2006	93
2007	93
2008	93
2009	93
2010	93
2011	93
2012	93
2013	93

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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.