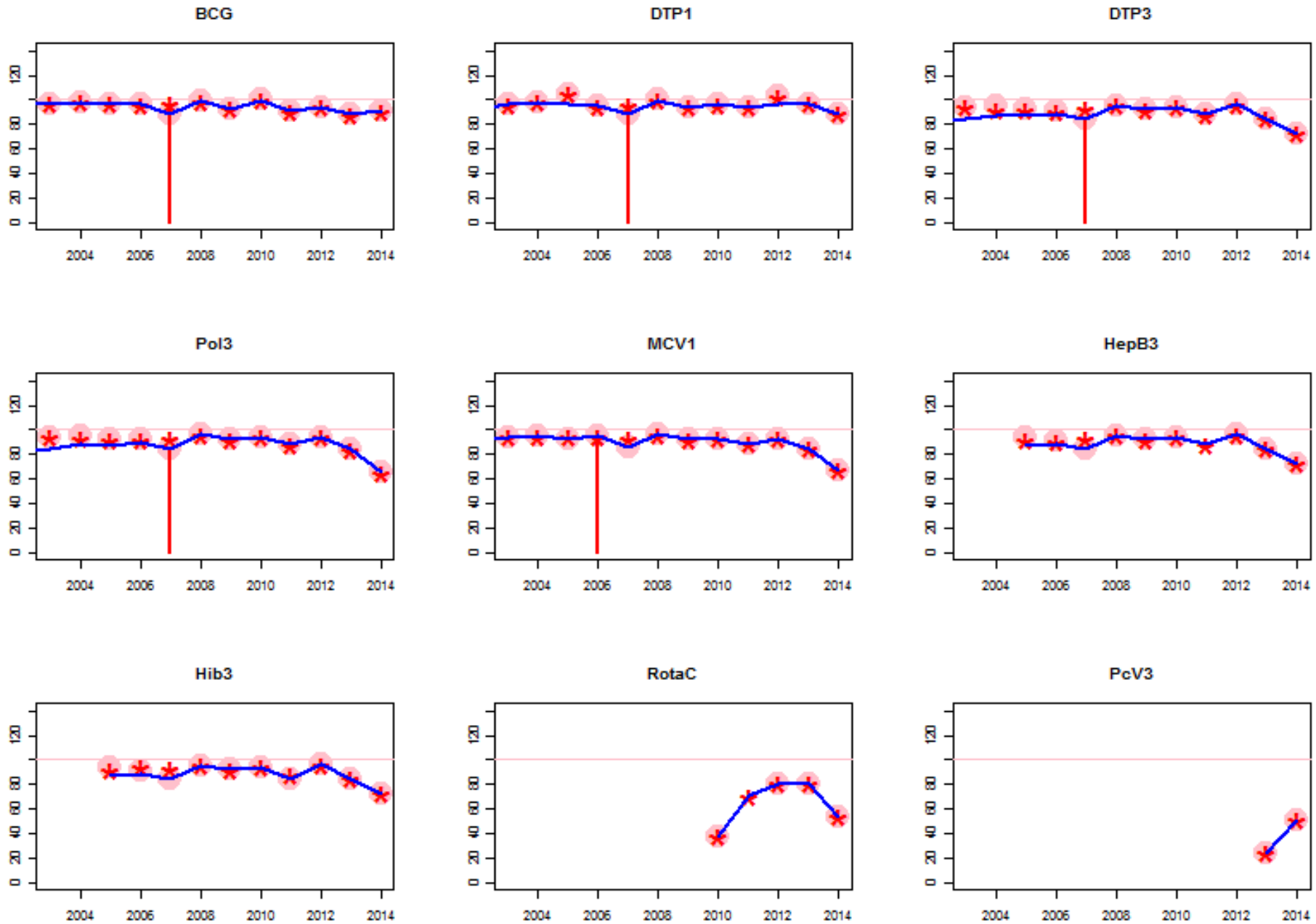
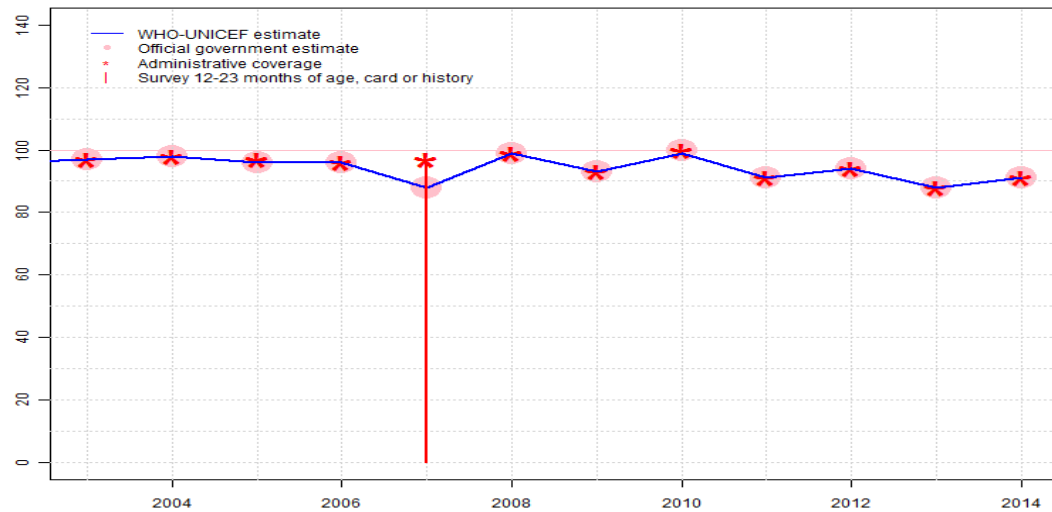


Guatemala: WHO and UNICEF estimates of immunization coverage: 2014 revision



# Guatemala - BCG

GTM - BCG



|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 97   | 98   | 96   | 96   | 88   | 99   | 93   | 99   | 91   | 94   | 88   | 91   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | 97   | 98   | 96   | 96   | 88   | 99   | 93   | 100  | 91   | 94   | 88   | 91   |
| Administrative | 97   | 98   | 97   | 96   | 97   | 99   | 93   | 100  | 91   | 94   | 88   | 91   |
| Survey         | NA   | NA   | NA   | NA   | 97   | 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.

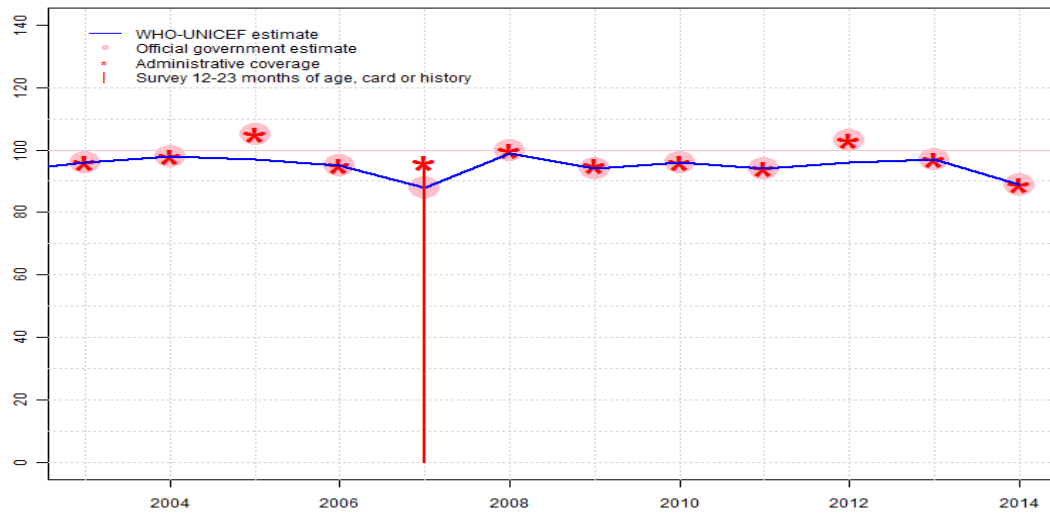
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 97 percent based on 1 survey(s). Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Decline in coverage is consistent with patterns in coverage for other antigens. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports five month stock-out of BCG vaccine at national level. Estimate is based on reported data. Estimate challenged by: D-

# Guatemala - DTP1

GTM - DTP1



|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 96   | 98   | 97   | 95   | 88   | 99   | 94   | 96   | 94   | 96   | 97   | 89   |
| Estimate GoC   | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    |
| Official       | 96   | 98   | 105  | 95   | 88   | 100  | 94   | 96   | 94   | 103  | 97   | 89   |
| Administrative | 96   | 98   | 105  | 95   | 96   | 100  | 95   | 96   | 94   | 103  | 97   | 89   |
| Survey         | NA   | NA   | NA   | NA   | 96   | 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.

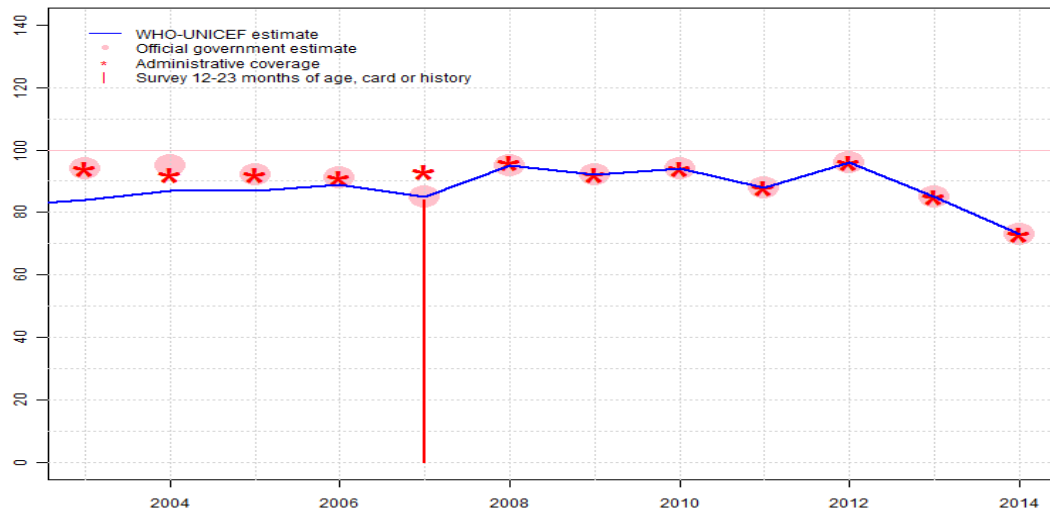
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on interpolation between coverage reported by national government. Reported data excluded. 105 percent greater than 100 percent. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 96 percent based on 1 survey(s). Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on interpolation between data reported by national government. Reported data excluded. 103 percent greater than 100 percent. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports nine month stock-out of DTP containing vaccine at national level. Estimate is based on reported data. Estimate challenged by: D-

# Guatemala - DTP3

GTM - DTP3



|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 84   | 87   | 87   | 89   | 85   | 95   | 92   | 94   | 88   | 96   | 85   | 73   |
| Estimate GoC   | ●●   | ●●   | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    |
| Official       | 94   | 95   | 92   | 91   | 85   | 95   | 92   | 94   | 88   | 96   | 85   | 73   |
| Administrative | 94   | 92   | 92   | 91   | 93   | 96   | 92   | 94   | 88   | 96   | 85   | 73   |
| Survey         | NA   | NA   | NA   | NA   | 84   | 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.

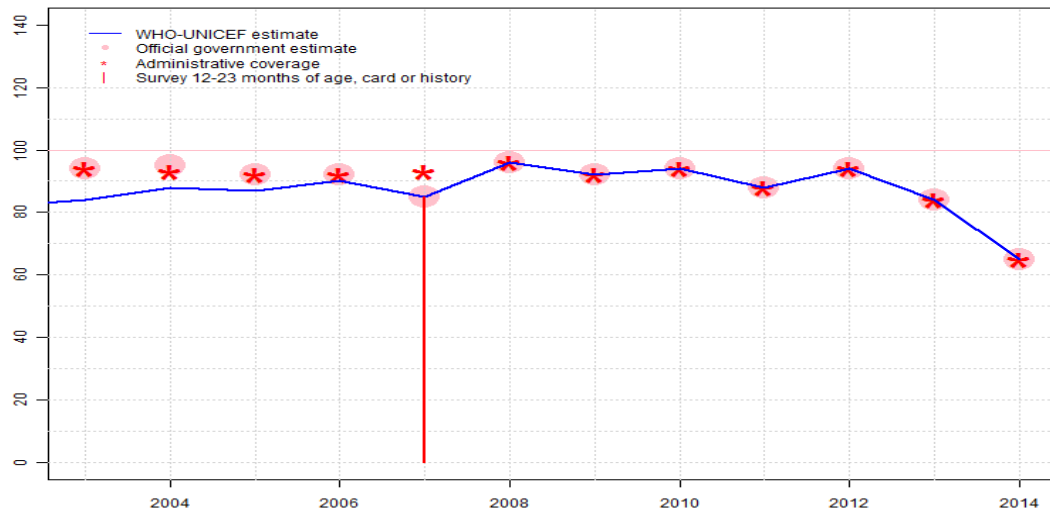
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Reported data calibrated to 2001 and 2007 levels. GoC=S+ D+
- 2004: Reported data calibrated to 2001 and 2007 levels. GoC=D+
- 2005: Reported data calibrated to 2001 and 2007 levels. Estimate challenged by: D-
- 2006: Reported data calibrated to 2001 and 2007 levels. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 84 percent based on 1 survey(s). Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate is based on reported data. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports nine month stock-out of DTP containing vaccine at national level. Estimate is based on reported data. Estimate challenged by: D-

# Guatemala - Pol3

GTM - Pol3



|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 84   | 88   | 87   | 90   | 85   | 96   | 92   | 94   | 88   | 94   | 84   | 65   |
| Estimate GoC   | ••   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | 94   | 95   | 92   | 92   | 85   | 96   | 92   | 94   | 88   | 94   | 84   | 65   |
| Administrative | 94   | 93   | 92   | 92   | 93   | 96   | 92   | 94   | 88   | 94   | 84   | 65   |
| Survey         | NA   | NA   | NA   | NA   | 85   | 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.

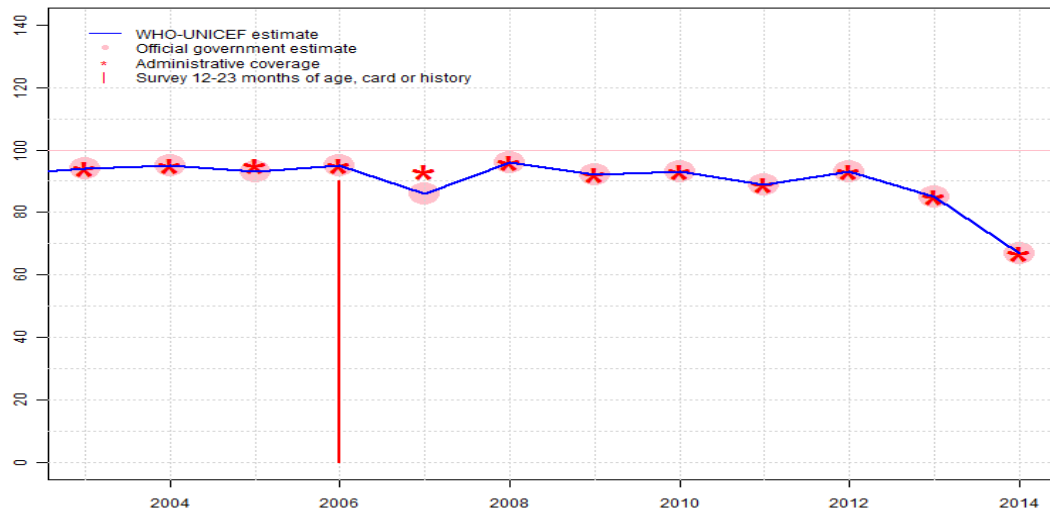
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2003: Reported data calibrated to 2001 and 2007 levels. GoC=S+ D+
- 2004: Reported data calibrated to 2001 and 2007 levels. Estimate challenged by: D-
- 2005: Reported data calibrated to 2001 and 2007 levels. Estimate challenged by: D-
- 2006: Reported data calibrated to 2001 and 2007 levels. Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government supported by survey. Survey evidence of 85 percent based on 1 survey(s). Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports six month stock-out of polio vaccine at national level. Estimate is based on reported data. Estimate challenged by: D-

# Guatemala - MCV1

GTM - MCV1



|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 94   | 95   | 93   | 95   | 86   | 96   | 92   | 93   | 89   | 93   | 85   | 67   |
| Estimate GoC   | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    |
| Official       | 94   | 95   | 93   | 95   | 86   | 96   | 92   | 93   | 89   | 93   | 85   | 67   |
| Administrative | 94   | 95   | 95   | 95   | 93   | 96   | 92   | 93   | 89   | 93   | 85   | 67   |
| Survey         | NA   | NA   | NA   | 90   | 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.

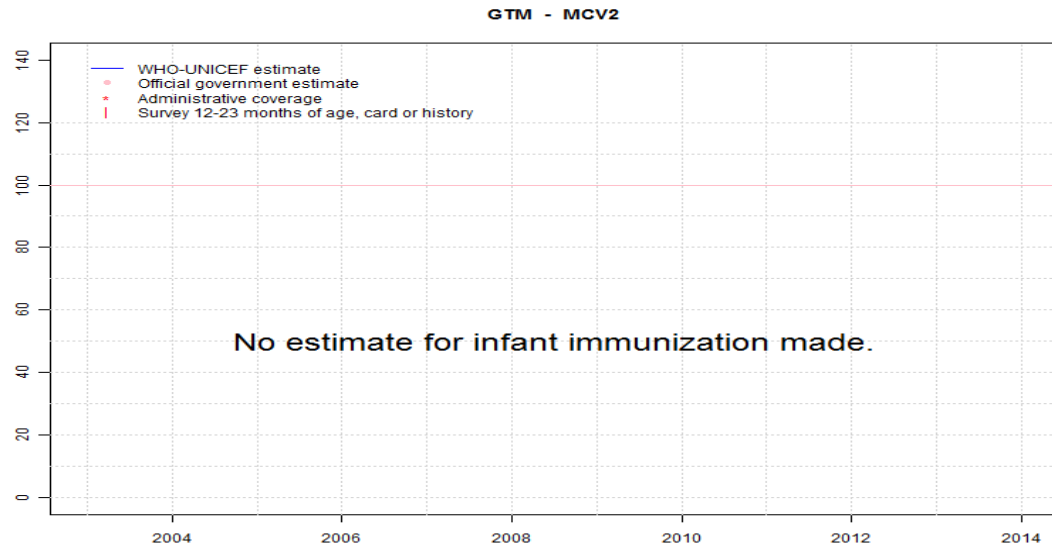
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2004: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2005: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2006: Estimate based on coverage reported by national government supported by survey. Survey evidence of 90 percent based on 1 survey(s). Estimate challenged by: D-
- 2007: Estimate based on coverage reported by national government. Survey result of 90 percent for age group 24-35 m supports reported data Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports seven month stock-out of measles containing vaccine at national level. Estimate is based on reported data. Estimate challenged by: D-

# Guatemala - MCV2



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

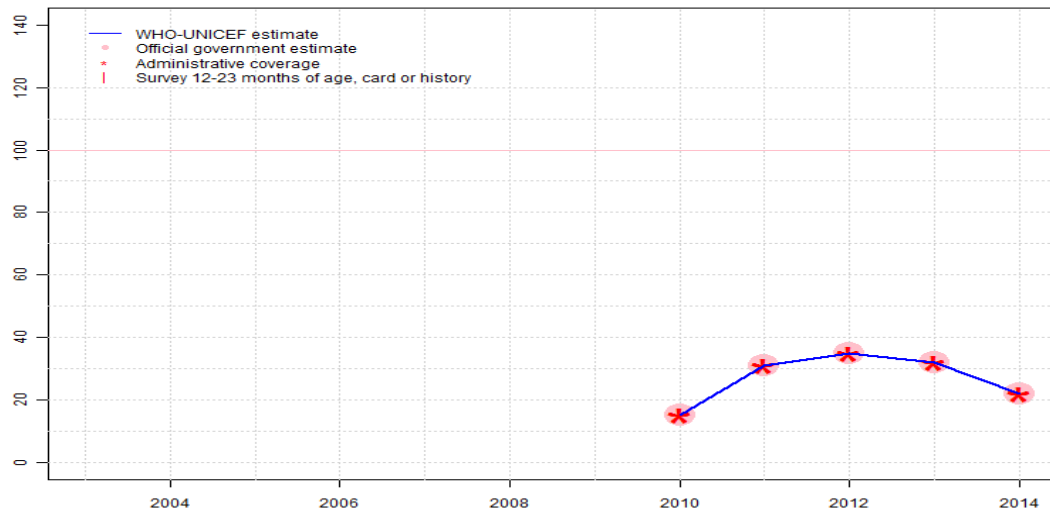
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

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

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

# Guatemala - HepBB

GTM - HepBB



|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 15   | 31   | 35   | 32   | 22   |
| Estimate GoC   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | ●●   | ●●   | ●●   | ●●   | ●●   |
| Official       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 15   | 31   | 35   | 32   | 22   |
| Administrative | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 15   | 31   | 35   | 32   | 22   |
| 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.

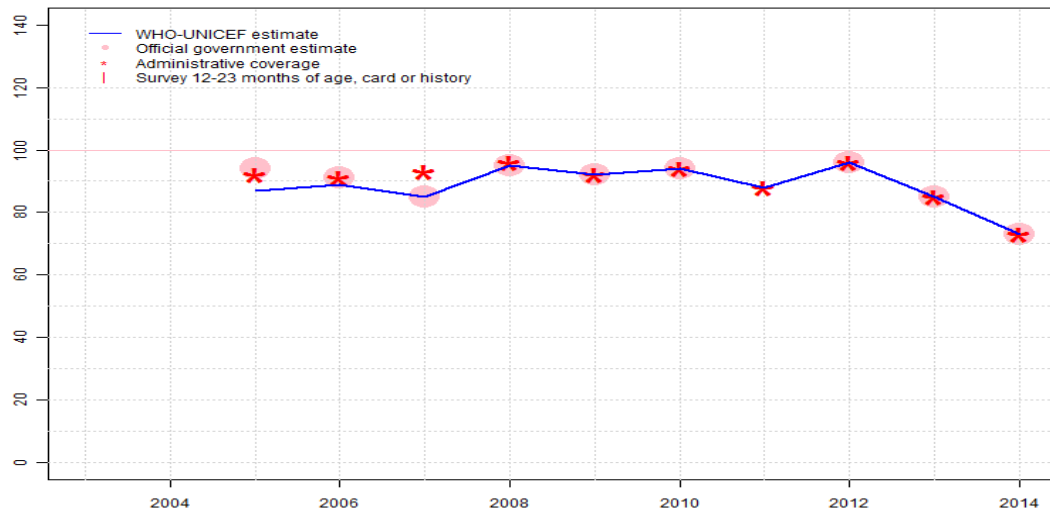
## Description:

- 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. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Estimate is based on reported data. GoC=R+ D+



# Guatemala - HepB3

GTM - HepB3



|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | 87   | 89   | 85   | 95   | 92   | 94   | 88   | 96   | 85   | 73   |
| Estimate GoC   | NA   | NA   | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    |
| Official       | NA   | NA   | 94   | 91   | 85   | 95   | 92   | 94   | NA   | 96   | 85   | 73   |
| Administrative | NA   | NA   | 92   | 91   | 93   | 96   | 92   | 94   | 88   | 96   | 85   | 73   |
| 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.

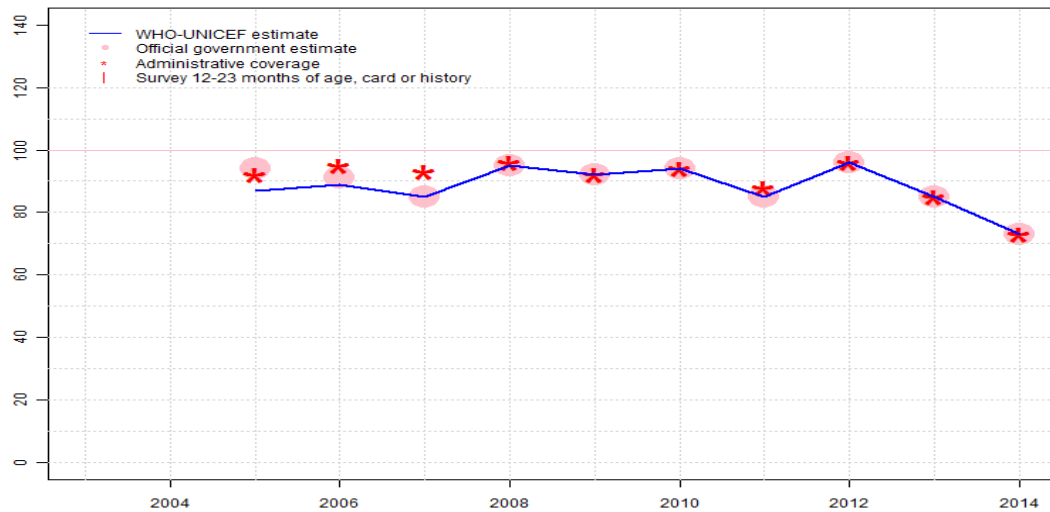
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2005: Estimate adjusted to level of DTP3 estimate. HepB vaccine introduced in 2005. Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: D-R-
- 2006: Estimate adjusted to level of DTP3 estimate. Estimate challenged by: D-R-
- 2007: Estimate based on reported data. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on reported administrative data. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate is based on reported data. Programme reports a five months stockout at national level. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports nine month stock-out of DTP containing vaccine at national level. Estimate is based on reported data. Estimate challenged by: D-

# Guatemala - Hib3

GTM - Hib3



|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | 87   | 89   | 85   | 95   | 92   | 94   | 85   | 96   | 85   | 73   |
| Estimate GoC   | NA   | NA   | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    | ●    |
| Official       | NA   | NA   | 94   | 91   | 85   | 95   | 92   | 94   | 85   | 96   | 85   | 73   |
| Administrative | NA   | NA   | 92   | 95   | 93   | 96   | 92   | 94   | 88   | 96   | 85   | 73   |
| 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.

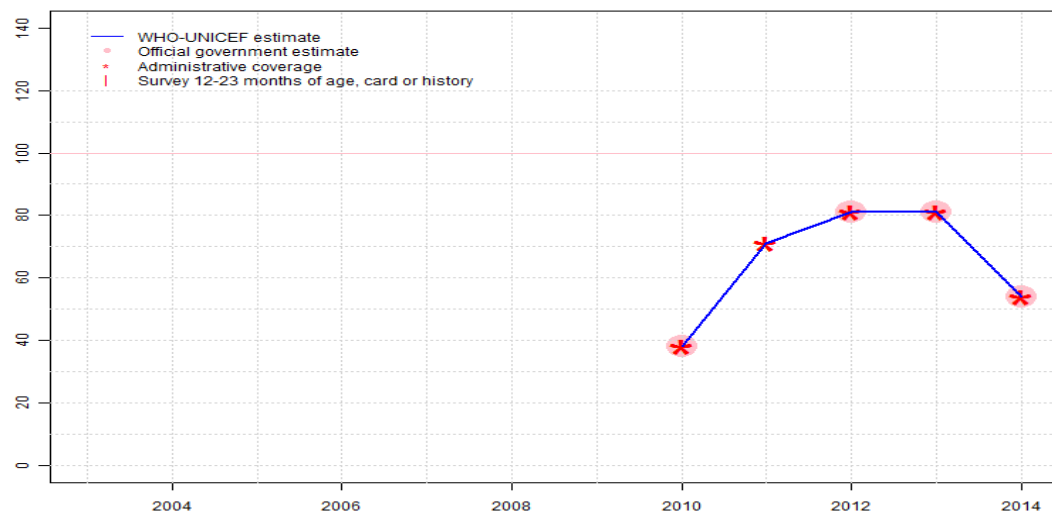
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2005: Estimate adjusted to level of DTP3 estimate. Hib vaccine introduced in 2005. Vaccine presentation is DTP-HepB-Hib. Estimate challenged by: D-R-
- 2006: Estimate adjusted to level of DTP3 estimate. Estimate challenged by: D-R-
- 2007: Estimate based on reported data. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2009: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate is based on reported data. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate is based on reported data. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports nine month stock-out of DTP containing vaccine at national level. Estimate is based on reported data. Estimate challenged by: D-

# Guatemala - RotaC

GTM - RotaC



## Description:

- 2010: Estimate based on coverage reported by national government. Rotavirus vaccine introduced in 2010. GoC=R+ D+
- 2011: Estimate based on reported administrative estimate. Estimate challenged by: D-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2013: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports three and a half month stock-out of rotavirus vaccine at national level. Estimate is based on reported data. GoC=R+ D+

|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 38   | 71   | 81   | 81   | 54   |
| Estimate GoC   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | ●●   | ●    | ●    | ●    | ●●   |
| Official       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 38   | NA   | 81   | 81   | 54   |
| Administrative | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 38   | 71   | 81   | 81   | 54   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

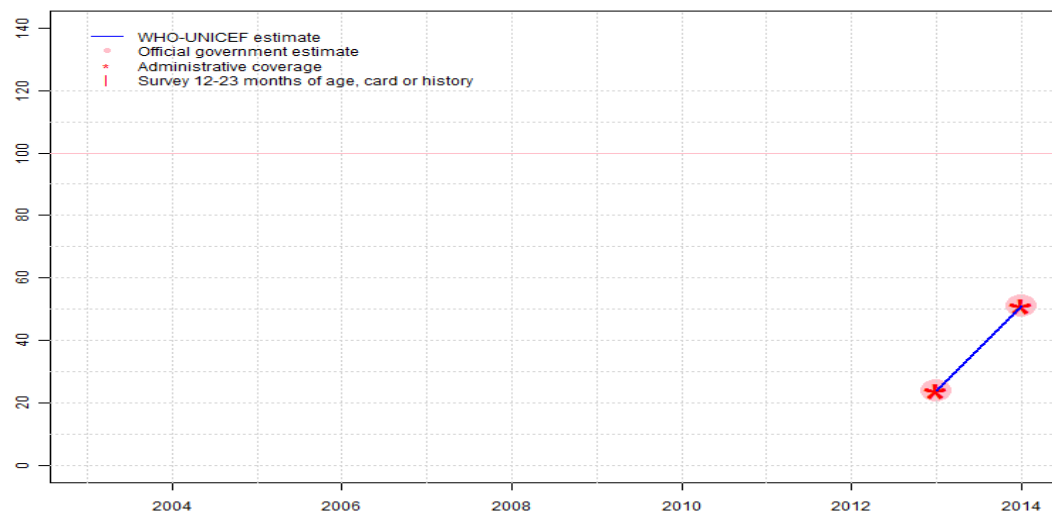
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability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

# Guatemala - PcV3

GTM - PcV3



|                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 24   | 51   |
| Estimate GoC   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | ●●   | ●●   |
| Official       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 24   | 51   |
| Administrative | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 24   | 51   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

## Description:

- 2013: Estimate based on coverage reported by national government. Pneumococcal conjugate vaccine introduced during November 2012. Reporting started during 2013. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. Declines in reported coverage during 2014 reflect incomplete reporting and disruptions in routine immunization service delivery resulting from human resource constraints for service delivery and inadequate funding to service delivering NGOs. WHO and UNICEF are aware of an on-going Demographic and Health Survey and await the final results. Programme reports five month stock-out of PcV vaccine at national level. Estimate is based on reported data. GoC=R+ D+

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.

# Guatemala - survey details

## 2007 Guatemala, Encuesta Nacional de Salud Materno Infantil 2008-2009

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG     | Card or History     | 97       | 12-23 m    | 1861   | 87         |
| DTP1    | Card or History     | 96       | 12-23 m    | 1861   | 87         |
| DTP3    | Card or History     | 84       | 12-23 m    | 1861   | 87         |
| Pol1    | Card or History     | 96       | 12-23 m    | 1861   | 87         |
| Pol3    | Card or History     | 85       | 12-23 m    | 1861   | 87         |

## 2006 Guatemala, Encuesta Nacional de Salud Materno Infantil 2008-2009

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| MCV1    | Card or History     | 90       | 24-35 m    | 1861   | 87         |

## 2001 Guatemala, Encuesta Nacional de Salud Materno Infantil 2002

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG     | Card or History     | 92       | 12-23 m    | 1487   | 69         |
| DTP1    | Card or History     | 93       | 12-23 m    | 1487   | 69         |
| DTP3    | Card or History     | 77       | 12-23 m    | 1487   | 69         |
| MCV1    | Card or History     | 75       | 12-23 m    | 1487   | 69         |
| Pol1    | Card or History     | 94       | 12-23 m    | 1487   | 69         |
| Pol3    | Card or History     | 78       | 12-23 m    | 1487   | 69         |

## 1998 Guatemala, Encuesta Nacional de Salud Materno Infantil 1998-1999

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
|---------|---------------------|----------|------------|--------|------------|

|      |                   |    |         |     |    |
|------|-------------------|----|---------|-----|----|
| BCG  | C or H <12 months | 82 | 12-23 m | 848 | 68 |
| BCG  | Card              | 65 | 12-23 m | 848 | 68 |
| BCG  | Card or History   | 90 | 12-23 m | 848 | 68 |
| BCG  | History           | 26 | 12-23 m | 848 | 68 |
| DTP1 | C or H <12 months | 88 | 12-23 m | 848 | 68 |
| DTP1 | Card              | 66 | 12-23 m | 848 | 68 |
| DTP1 | Card or History   | 92 | 12-23 m | 848 | 68 |
| DTP1 | History           | 26 | 12-23 m | 848 | 68 |
| DTP3 | C or H <12 months | 54 | 12-23 m | 848 | 68 |
| DTP3 | Card              | 56 | 12-23 m | 848 | 68 |
| DTP3 | Card or History   | 70 | 12-23 m | 848 | 68 |
| DTP3 | History           | 15 | 12-23 m | 848 | 68 |
| MCV1 | C or H <12 months | 53 | 12-23 m | 848 | 68 |
| MCV1 | Card              | 59 | 12-23 m | 848 | 68 |
| MCV1 | Card or History   | 81 | 12-23 m | 848 | 68 |
| MCV1 | History           | 22 | 12-23 m | 848 | 68 |
| Pol1 | C or H <12 months | 59 | 12-23 m | 848 | 68 |
| Pol1 | Card              | 67 | 12-23 m | 848 | 68 |
| Pol1 | Card or History   | 92 | 12-23 m | 848 | 68 |
| Pol1 | History           | 25 | 12-23 m | 848 | 68 |
| Pol3 | C or H <12 months | 52 | 12-23 m | 848 | 68 |
| Pol3 | Card              | 56 | 12-23 m | 848 | 68 |
| Pol3 | Card or History   | 67 | 12-23 m | 848 | 68 |
| Pol3 | History           | 10 | 12-23 m | 848 | 68 |

## 1997 Guatemala, Encuesta Nacional de Salud Materno Infantil 1998-1999

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG     | C or H <12 months   | 77       | 24-35 m    | 868    | 68         |
| DTP1    | C or H <12 months   | 80       | 24-35 m    | 868    | 68         |
| DTP3    | C or H <12 months   | 51       | 24-35 m    | 868    | 68         |
| MCV1    | C or H <12 months   | 48       | 24-35 m    | 868    | 68         |
| Pol1    | C or H <12 months   | 81       | 24-35 m    | 868    | 68         |
| Pol3    | C or H <12 months   | 49       | 24-35 m    | 868    | 68         |

# Guatemala - survey details

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Further information and estimates for previous years are available at:

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

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

## Guatemala

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

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

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

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

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

| Year | PAB coverage estimate (%) |
|------|---------------------------|
| 2003 | 69                        |
| 2004 | 70                        |
| 2005 | 70                        |
| 2006 | 70                        |
| 2007 | 71                        |
| 2008 | 71                        |
| 2009 | 71                        |
| 2010 | 85                        |
| 2011 | 85                        |
| 2012 | 85                        |
| 2013 | 85                        |
| 2014 | 85                        |

<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.