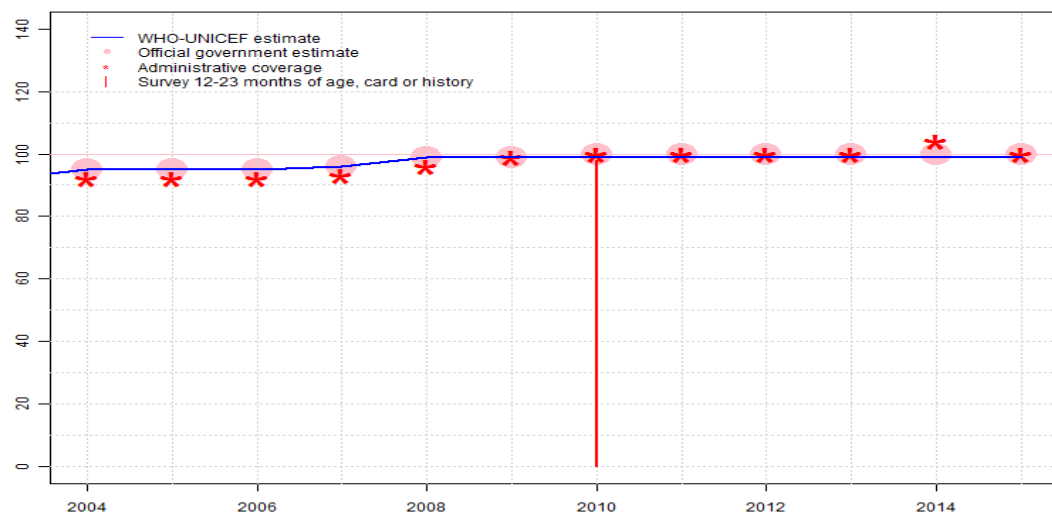


# Morocco - BCG

MAR - BCG



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 95   | 95   | 95   | 96   | 99   | 99   | 99   | 99   | 99   | 99   | 99   | 99   |
| Estimate GoC   | ●●●  | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   |
| Official       | 95   | 95   | 95   | 96   | 99   | 99   | 100  | 100  | 100  | 100  | 100  | 100  |
| Administrative | 92   | 92   | 92   | 93   | 96   | 99   | 100  | 100  | 100  | 100  | 104  | 100  |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | 98   | NA   | NA   | NA   | NA   | NA   |

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

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

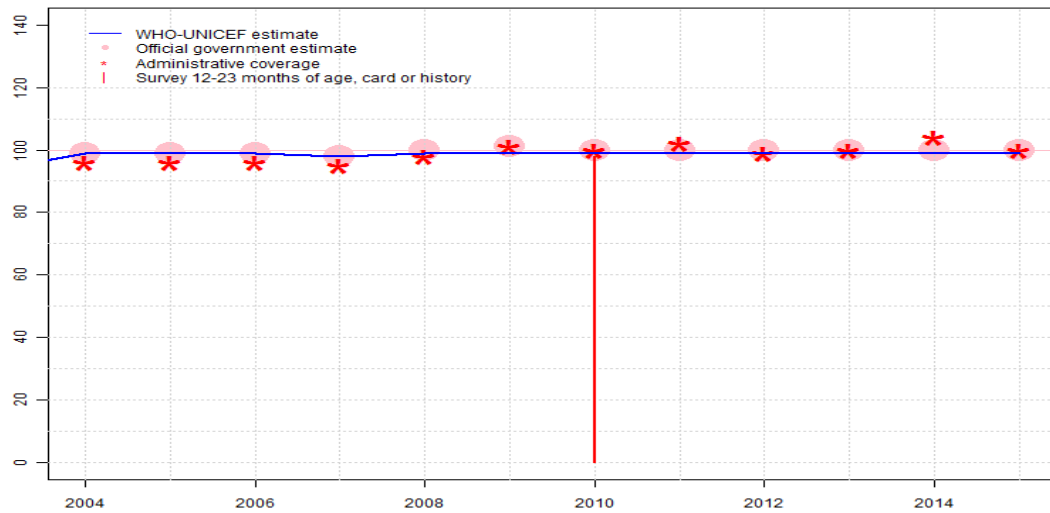
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2010: Estimate based on coverage reported by national government. Survey results ignored. Sample size 0 less than 300. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. 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+

# Morocco - DTP1

MAR - DTP1



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 99   | 99   | 99   | 98   | 99   | 99   | 99   | 99   | 99   | 99   | 99   | 99   |
| Estimate GoC   | ●●●  | ●●   | ●●   | ●●   | ●●   | ●    | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   |
| Official       | 99   | 99   | 99   | 98   | 100  | 101  | 100  | 100  | 100  | 100  | 100  | 100  |
| Administrative | 96   | 96   | 96   | 95   | 98   | 101  | 100  | 102  | 99   | 100  | 104  | 100  |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | 98   | NA   | NA   | NA   | NA   | NA   |

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

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

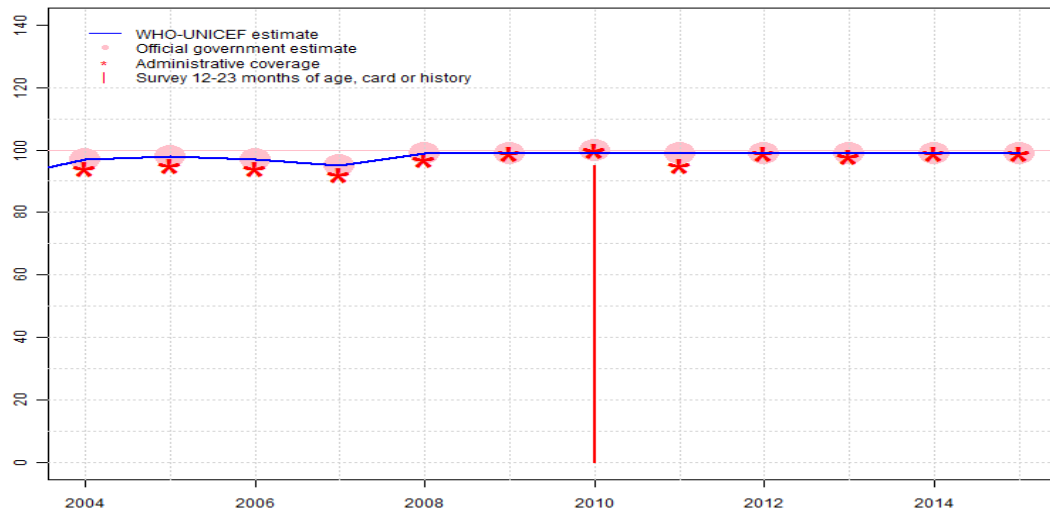
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2009: Estimate based on interpolation between data reported by national government. Reported data excluded. 101 percent greater than 100 percent. National reported estimates include estimated number of immunizations provided in the private sector. GoC=No accepted empirical data
- 2010: Estimate based on coverage reported by national government. Survey results ignored. Sample size 0 less than 300. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. 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+

# Morocco - DTP3

MAR - DTP3



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 97   | 98   | 97   | 95   | 99   | 99   | 99   | 99   | 99   | 99   | 99   | 99   |
| Estimate GoC   | ●●●  | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   |
| Official       | 97   | 98   | 97   | 95   | 99   | 99   | 100  | 99   | 99   | 99   | 99   | 99   |
| Administrative | 94   | 95   | 94   | 92   | 97   | 99   | 100  | 95   | 99   | 98   | 99   | 99   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | 95   | NA   | NA   | NA   | NA   | NA   |

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

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

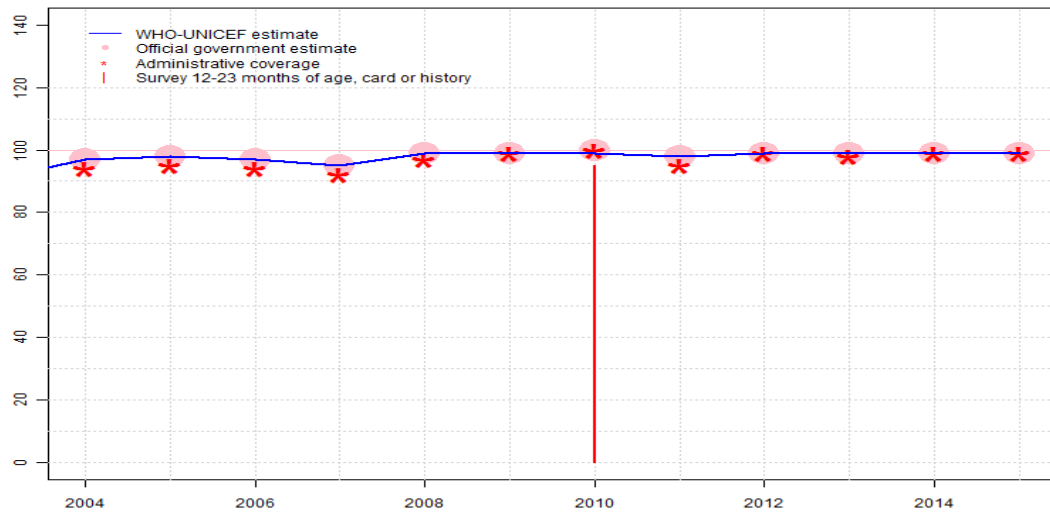
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+
- 2010: Estimate based on coverage reported by national government. Survey results ignored. Sample size 0 less than 300. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. 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+

# Morocco - Pol3

MAR - Pol3



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 97   | 98   | 97   | 95   | 99   | 99   | 99   | 98   | 99   | 99   | 99   | 99   |
| Estimate GoC   | ●●●  | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   |
| Official       | 97   | 98   | 97   | 95   | 99   | 99   | 100  | 98   | 99   | 99   | 99   | 99   |
| Administrative | 94   | 95   | 94   | 92   | 97   | 99   | 100  | 95   | 99   | 98   | 99   | 99   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | 95   | NA   | NA   | NA   | NA   | NA   |

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

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

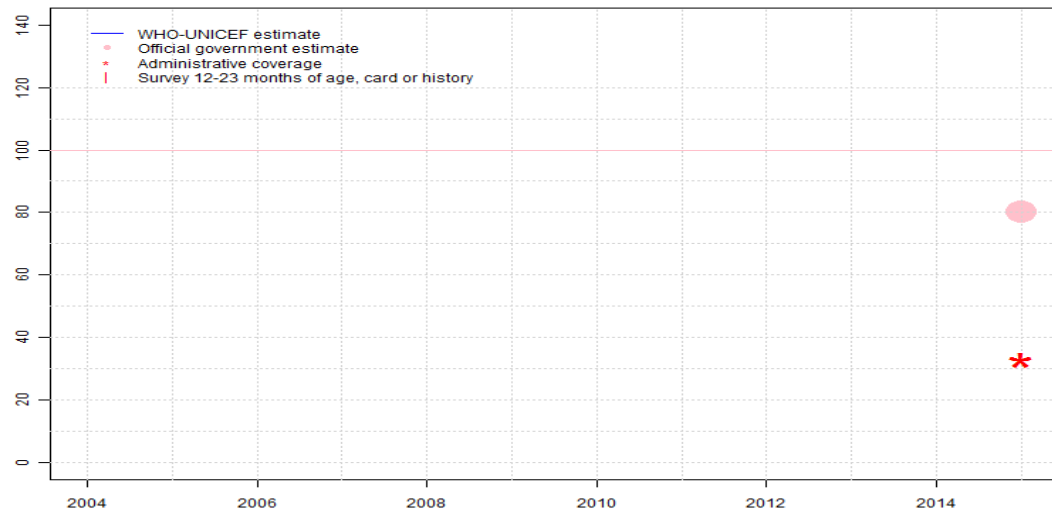
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+
- 2010: Estimate based on coverage reported by national government. Survey results ignored. Sample size 0 less than 300. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. 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+

# Morocco - IPV1

MAR - IPV1



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 33   |
| 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   | 80   |
| Administrative | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 33   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

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

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

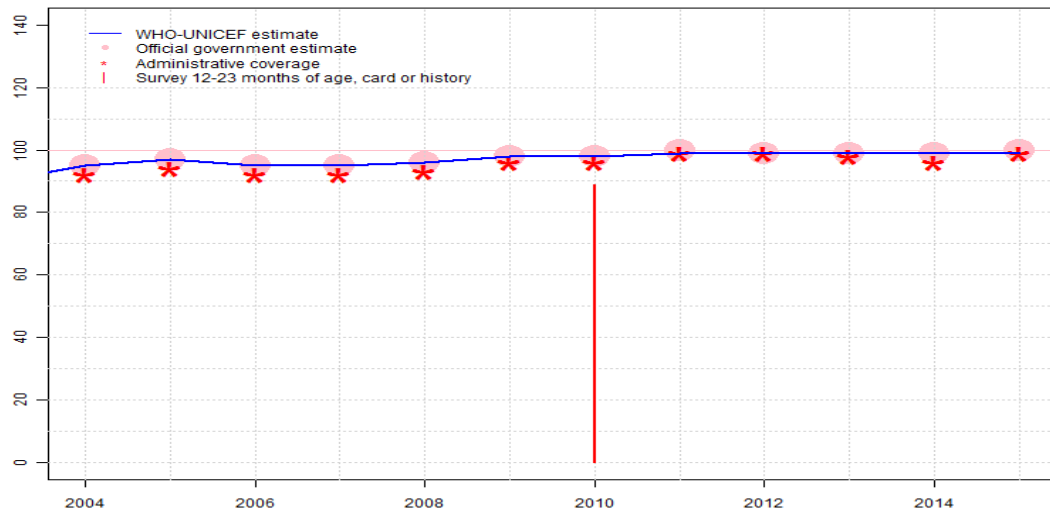
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

2015: Estimate based on reported administrative estimate. National reported estimates include estimated number of immunizations provided in the private sector. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. IPV introduced in June 2015. Estimate is based on reported administrative coverage. GoC=R+ D+

# Morocco - MCV1

MAR - MCV1



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 95   | 97   | 95   | 95   | 96   | 98   | 98   | 99   | 99   | 99   | 99   | 99   |
| Estimate GoC   | ●●●  | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   | ●●   |
| Official       | 95   | 97   | 95   | 95   | 96   | 98   | 98   | 100  | 99   | 99   | 99   | 100  |
| Administrative | 92   | 94   | 92   | 92   | 93   | 96   | 96   | 99   | 99   | 98   | 96   | 99   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | 89   | NA   | NA   | NA   | NA   | NA   |

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

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

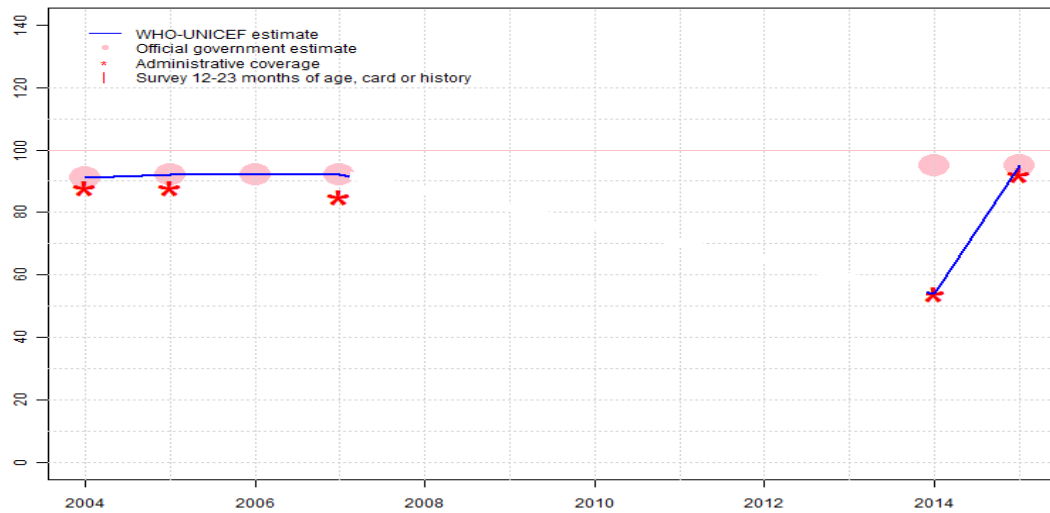
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ S+ D+
- 2005: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+
- 2010: Estimate based on coverage reported by national government. Survey results ignored. Sample size 0 less than 300. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. 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+

# Morocco - MCV2

MAR - MCV2



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 91   | 92   | 92   | 92   | NA   | NA   | NA   | NA   | NA   | NA   | 54   | 95   |
| Estimate GoC   | ●    | ●●   | ●●   | ●●   | NA   | NA   | NA   | NA   | NA   | NA   | ●●   | ●●   |
| Official       | 91   | 92   | 92   | 92   | NA   | NA   | NA   | NA   | NA   | NA   | 95   | 95   |
| Administrative | 88   | 88   | NA   | 85   | NA   | NA   | NA   | NA   | NA   | NA   | 54   | 92   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

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

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

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

## Description:

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

2004: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. Estimate challenged by: D-

2005: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+

2006: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+

2007: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. Routine administration of the second dose of measles was discontinued in 2007. GoC=R+ D+

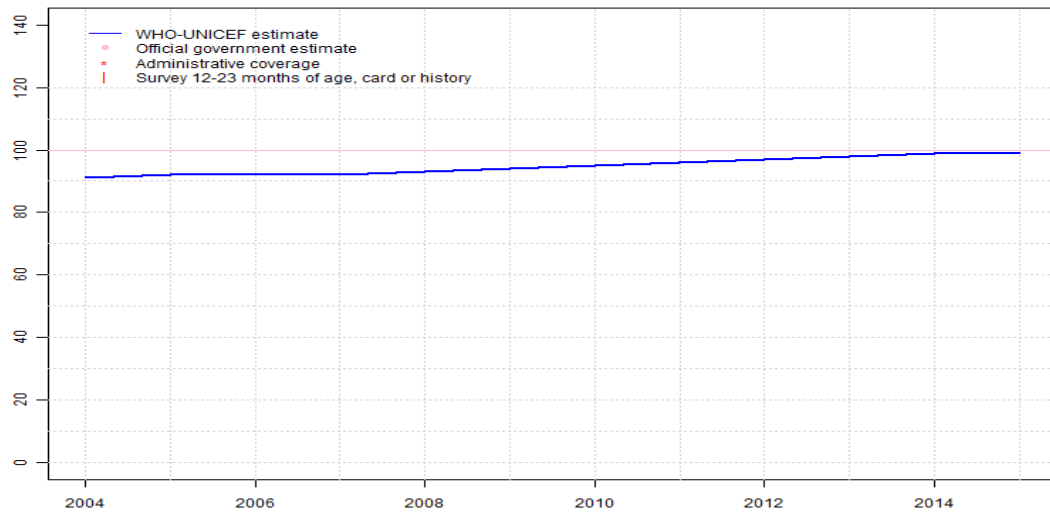
2014: Estimate based on reported administrative estimate. National reported estimates include estimated number of immunizations provided in the private sector. No explanation for adjustment from administrative coverage. Measles second dose re-introduced during April 2014. GoC=R+ D+

2015: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. No nationally representative household survey within the last 5 years. WHO and UNICEF recommend a high-quality survey to confirm reported levels of coverage. Reported coverage reflects children reached following re-introduction of MCV2 during 2014. GoC=R+ D+



# Morocco - RCV1

MAR - RCV1



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 91   | 92   | 92   | 92   | NA   | NA   | NA   | NA   | NA   | NA   | 99   | 99   |
| Estimate GoC   | ●    | ●●   | ●●   | ●●   | NA   | NA   | NA   | NA   | NA   | NA   | ●●   | ●●   |
| Official       | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |
| Administrative | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

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

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

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

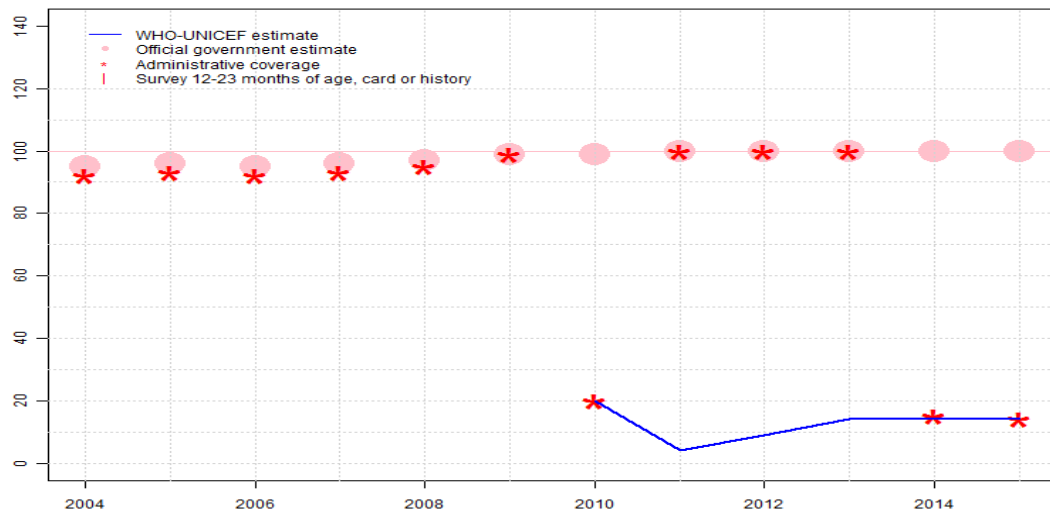
## Description:

For this revision, coverage estimates for the first dose of rubella containing vaccine are based on WHO and UNICEF estimates of coverage of measles containing vaccine. Nationally reported coverage of rubella containing vaccine is not taken into consideration nor are they represented in the accompanying graph and data table.

- 2004: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate National reported estimates include estimated number of immunizations provided in the private sector. Estimate challenged by: D-
- 2005: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+
- 2006: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+
- 2007: First dose of rubella vaccine given with second dose of measles containing vaccine. Estimate based on MCV2 estimate National reported estimates include estimated number of immunizations provided in the private sector. Routine administration of rubella containing vaccine was discontinued along with the second dose of measles in 2007. GoC=R+ D+
- 2014: Estimate based on estimated MCV1. National reported estimates include estimated number of immunizations provided in the private sector. Rubella containing vaccine re-introduced in combination with the first dose of MCV during 2014. GoC=R+ D+
- 2015: Estimate based on estimated MCV1. National reported estimates include estimated number of immunizations provided in the private sector. 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+

# Morocco - HepBB

MAR - HepBB



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | 20   | 4    | 9    | 14   | 14   | 14   |
| Estimate GoC   | NA   | NA   | NA   | NA   | NA   | NA   | •    | •    | •    | •    | ••   | ••   |
| Official       | 95   | 96   | 95   | 96   | 97   | 99   | 99   | 100  | 100  | 100  | 100  | 100  |
| Administrative | 92   | 93   | 92   | 93   | 95   | 99   | 20   | 100  | 100  | 100  | 15   | 14   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

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

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

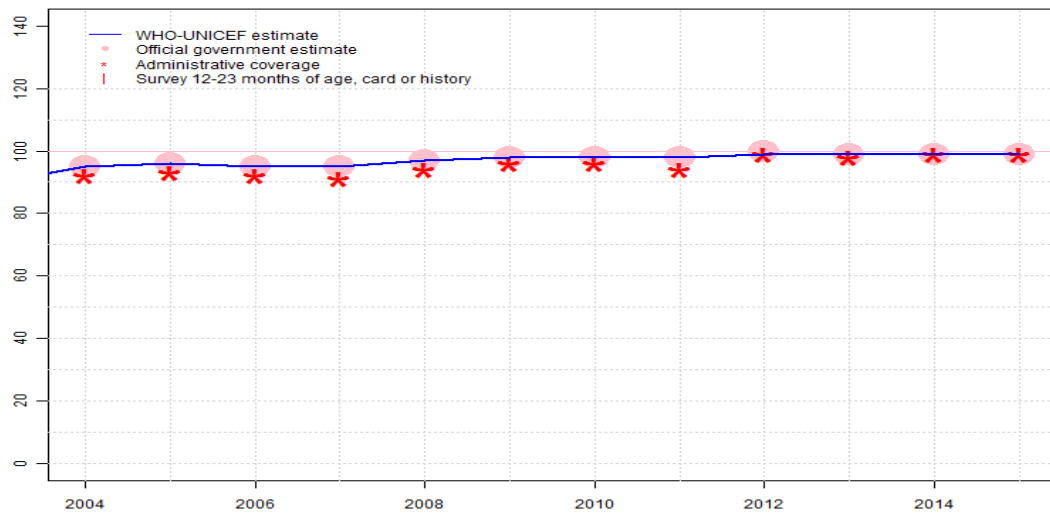
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2010: Reported coverage level reflects HepB coverage within 24 hours and beyond. Estimated coverage reflects doses administered within 24 hours. National reported estimates include estimated number of immunizations provided in the private sector. Estimate challenged by: D-R-
- 2011: Reported coverage level reflects HepB coverage within 24 hours and beyond. Estimated coverage reflects doses administered within 24 hours. National reported estimates include estimated number of immunizations provided in the private sector. Estimate challenged by: R-
- 2012: Reported coverage level reflects HepB coverage within 24 hours and beyond. Estimated coverage reflects doses administered within 24 hours. National reported estimates include estimated number of immunizations provided in the private sector. Estimate challenged by: R-
- 2013: Reported coverage level reflects HepB coverage within 24 hours and beyond. Estimated coverage reflects doses administered within 24 hours. National reported estimates include estimated number of immunizations provided in the private sector. Estimate challenged by: R-
- 2014: Reported data calibrated to 2013 levels. National reported estimates include estimated number of immunizations provided in the private sector. Reported administrative coverage level reflects HepB coverage within 24 hours. Reported official government estimate includes HepB coverage beyond 24 hours. Estimated coverage reflects doses administered within 24 hours. GoC=D+
- 2015: Reported data calibrated to 2013 levels. National reported estimates include estimated number of immunizations provided in the private sector. 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=D+

# Morocco - HepB3

MAR - HepB3



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | 95   | 96   | 95   | 95   | 97   | 98   | 98   | 98   | 99   | 99   | 99   | 99   |
| Estimate GoC   | ••   | ••   | ••   | ••   | ••   | ••   | ••   | ••   | ••   | ••   | ••   | ••   |
| Official       | 95   | 96   | 95   | 95   | 97   | 98   | 98   | 98   | 100  | 99   | 99   | 99   |
| Administrative | 92   | 93   | 92   | 91   | 94   | 96   | 96   | 94   | 99   | 98   | 99   | 99   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

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

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

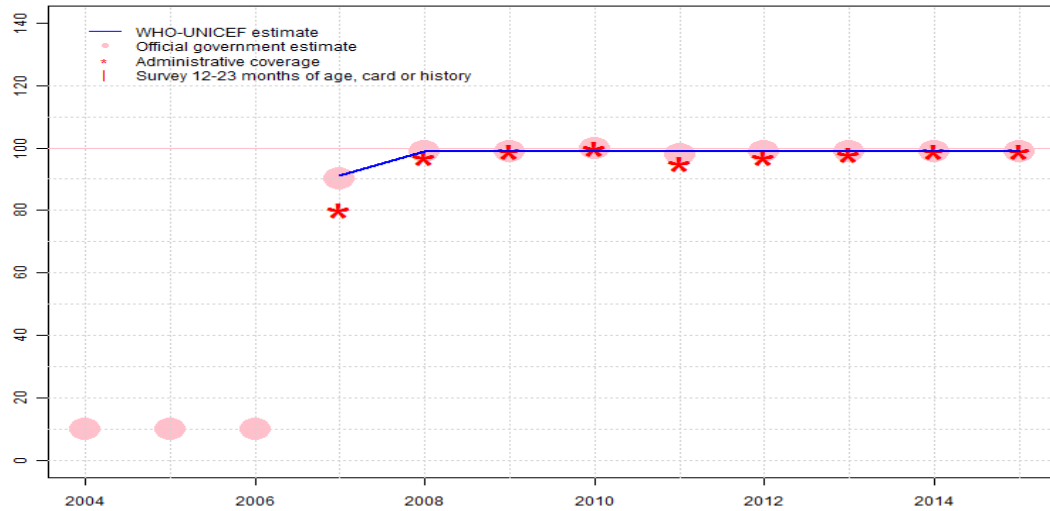
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2004: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2009: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+
- 2010: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2011: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. 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+

# Morocco - Hib3

MAR - Hib3



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | 91   | 99   | 99   | 99   | 99   | 99   | 99   | 99   | 99   |
| Estimate GoC   | NA   | NA   | NA   | •    | ••   | •    | ••   | •    | ••   | ••   | ••   | ••   |
| Official       | 10   | 10   | 10   | 90   | 99   | 99   | 100  | 98   | 99   | 99   | 99   | 99   |
| Administrative | NA   | NA   | NA   | 80   | 97   | 99   | 100  | 95   | 97   | 98   | 99   | 99   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

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

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

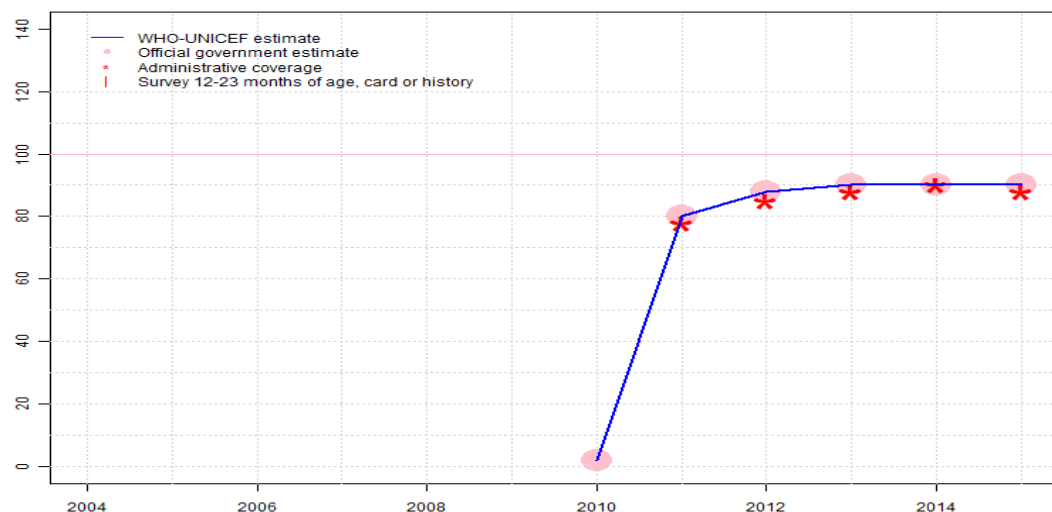
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2007: Reported data calibrated to 2011 levels. National reported estimates include estimated number of immunizations provided in the private sector. Hib vaccine introduced in 2007. Vaccine presentation is DTP-Hib. Estimate challenged by: D-
- 2008: Reported data calibrated to 2011 levels. National reported estimates include estimated number of immunizations provided in the private sector. GoC=D+
- 2009: Reported data calibrated to 2011 levels. National reported estimates include estimated number of immunizations provided in the private sector. GoC=No accepted empirical data
- 2010: Reported data calibrated to 2011 levels. National reported estimates include estimated number of immunizations provided in the private sector. GoC=D+
- 2011: Estimate set to DTP3 level. National reported estimates include estimated number of immunizations provided in the private sector. Estimate challenged by: R-
- 2012: Reported data calibrated to 2011 levels. National reported estimates include estimated number of immunizations provided in the private sector. GoC=D+
- 2013: Reported data calibrated to 2011 levels. National reported estimates include estimated number of immunizations provided in the private sector. GoC=D+
- 2014: Reported data calibrated to 2011 levels. National reported estimates include estimated number of immunizations provided in the private sector. GoC=D+
- 2015: Reported data calibrated to 2011 levels. National reported estimates include estimated number of immunizations provided in the private sector. 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=D+

# Morocco - RotaC

MAR - RotaC



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | 2    | 80   | 88   | 90   | 90   | 90   |
| Estimate GoC   | NA   | NA   | NA   | NA   | NA   | NA   | ••   | ••   | ••   | ••   | ••   | ••   |
| Official       | NA   | NA   | NA   | NA   | NA   | NA   | 2    | 80   | 88   | 90   | 90   | 90   |
| Administrative | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 78   | 85   | 88   | 90   | 88   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

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

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

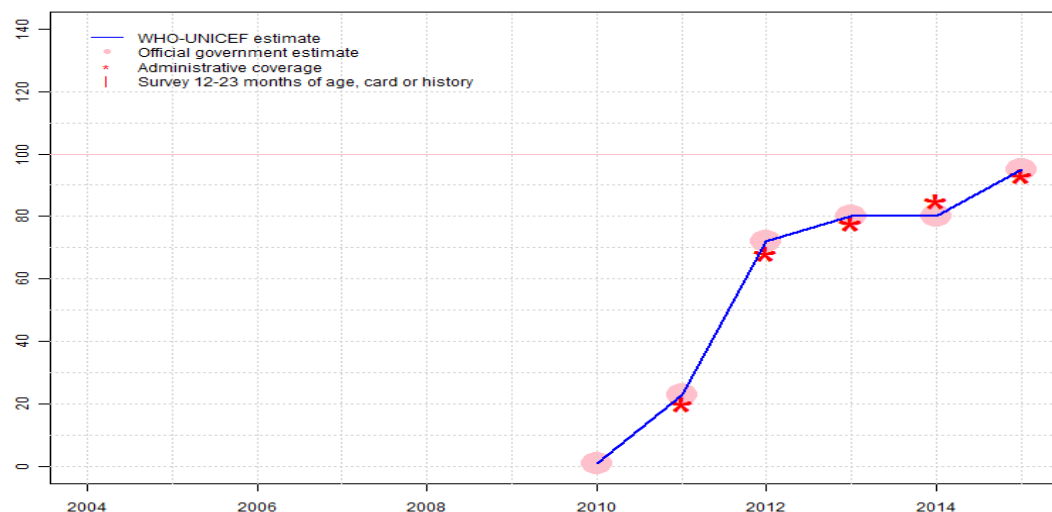
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

## Description:

- 2010: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. Rotavirus vaccine introduced in 2010. GoC=R+
- 2011: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2012: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. 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+

# Morocco - PcV3

MAR - PcV3



|                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate       | NA   | NA   | NA   | NA   | NA   | NA   | 1    | 23   | 72   | 80   | 80   | 95   |
| Estimate GoC   | NA   | NA   | NA   | NA   | NA   | NA   | ••   | ••   | ••   | ••   | ••   | ••   |
| Official       | NA   | NA   | NA   | NA   | NA   | NA   | 1    | 23   | 72   | 80   | 80   | 95   |
| Administrative | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 20   | 68   | 78   | 85   | 93   |
| Survey         | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

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

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

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

## Description:

- 2010: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. Pneumococcal conjugate vaccine introduced in 2010. GoC=R+
- 2011: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+
- 2012: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2013: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2014: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. GoC=R+ D+
- 2015: Estimate based on coverage reported by national government. National reported estimates include estimated number of immunizations provided in the private sector. 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+

## Morocco - survey details

### 2010 Enquête Nationale sur la Population et la Santé Familiale (ENPSF) 2011

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG     | Card or History     | 98       | 12-23 m    | -      | 86         |
| DTP1    | Card or History     | 98       | 12-23 m    | -      | 86         |
| DTP3    | Card or History     | 95       | 12-23 m    | -      | 86         |
| MCV1    | Card or History     | 89       | 12-23 m    | -      | 86         |
| Pol1    | Card or History     | 97       | 12-23 m    | -      | 86         |
| Pol3    | Card or History     | 95       | 12-23 m    | -      | 86         |

### 2002 L'Enquête Nationale sur la Population et la Santé Familiale du Maroc 2003-2004

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG     | C or H <12 months   | 98       | 12-23 m    | 1130   | 78         |
| BCG     | Card                | 78       | 12-23 m    | 1130   | 78         |
| BCG     | Card or history     | 98       | 12-23 m    | 1130   | 78         |
| BCG     | History             | 20       | 12-23 m    | 1130   | 78         |

|      |                   |    |         |      |    |
|------|-------------------|----|---------|------|----|
| DTP1 | C or H <12 months | 97 | 12-23 m | 1130 | 78 |
| DTP1 | Card              | 78 | 12-23 m | 1130 | 78 |
| DTP1 | Card or history   | 98 | 12-23 m | 1130 | 78 |
| DTP1 | History           | 20 | 12-23 m | 1130 | 78 |
| DTP3 | C or H <12 months | 93 | 12-23 m | 1130 | 78 |
| DTP3 | Card              | 75 | 12-23 m | 1130 | 78 |
| DTP3 | Card or history   | 95 | 12-23 m | 1130 | 78 |
| DTP3 | History           | 19 | 12-23 m | 1130 | 78 |
| MCV1 | C or H <12 months | 85 | 12-23 m | 1130 | 78 |
| MCV1 | Card              | 72 | 12-23 m | 1130 | 78 |
| MCV1 | Card or history   | 90 | 12-23 m | 1130 | 78 |
| MCV1 | History           | 19 | 12-23 m | 1130 | 78 |
| Pol1 | C or H <12 months | 97 | 12-23 m | 1130 | 78 |
| Pol1 | Card              | 78 | 12-23 m | 1130 | 78 |
| Pol1 | Card or history   | 98 | 12-23 m | 1130 | 78 |
| Pol1 | History           | 20 | 12-23 m | 1130 | 78 |
| Pol3 | C or H <12 months | 93 | 12-23 m | 1130 | 78 |
| Pol3 | Card              | 76 | 12-23 m | 1130 | 78 |
| Pol3 | Card or history   | 95 | 12-23 m | 1130 | 78 |
| Pol3 | History           | 20 | 12-23 m | 1130 | 78 |

Further information and estimates for previous years are available at:

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

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

## Morocco

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

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

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

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

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

| Year | PAB coverage estimate (%) |
|------|---------------------------|
| 2004 | 84                        |
| 2005 | 89                        |
| 2006 | 87                        |
| 2007 | 88                        |
| 2008 | 90                        |
| 2009 | 87                        |
| 2010 | 89                        |
| 2011 | 89                        |
| 2012 | 89                        |
| 2013 | 89                        |
| 2014 | 88                        |
| 2015 | 88                        |

<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.