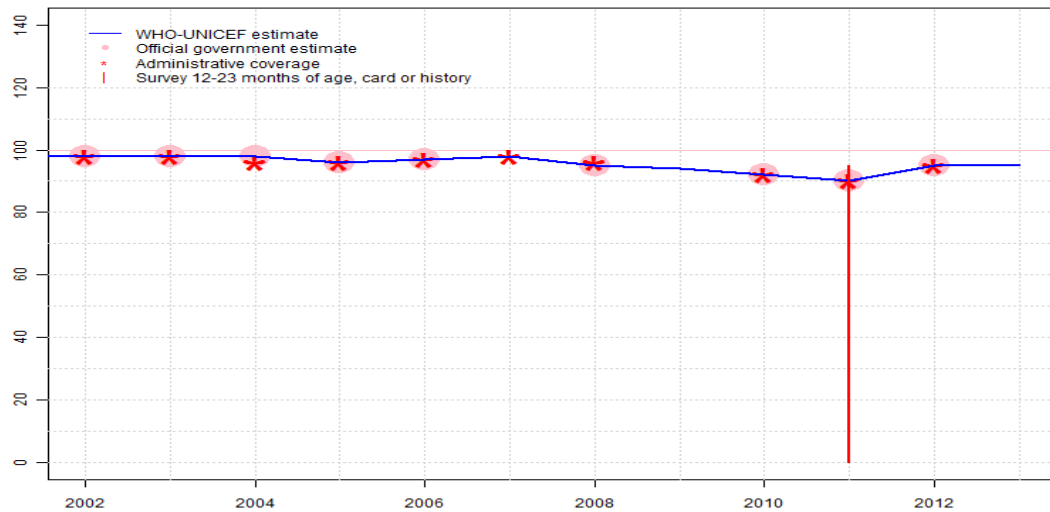


Ukraine - BCG

UKR - BCG



| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 98 | 98 | 98 | 96 | 97 | 98 | 95 | 94 | 92 | 90 | 95 | 95 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 98 | 98 | 98 | 96 | 97 | NA | 95 | NA | 92 | 90 | 95 | NA |
| Administrative | 98 | 98 | 96 | 96 | 97 | 98 | 96 | NA | 92 | 90 | 95 | NA |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | 95 | NA | NA |

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

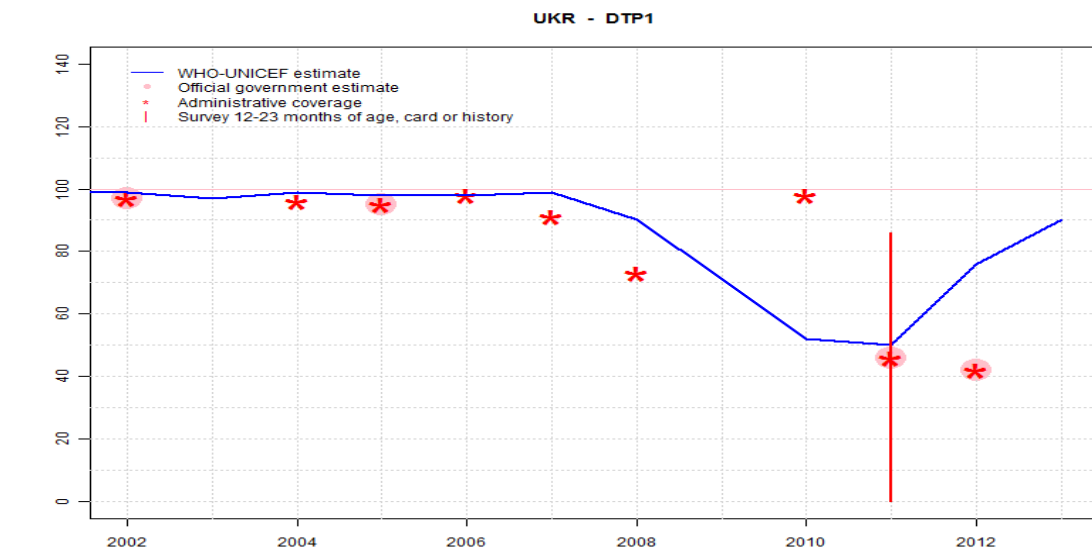
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on reported administrative data. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. A 2011 external review of Ukraine's National Immunization Programme reports that programme performance in Ukraine begin to decline in previous years due to vaccine stock-outs, excessive medicalization of vaccine delivery, and the loss in public confidence in immunization. GoC=R+ D+
- 2009: Estimate based on interpolation between data reported by national government. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Ukraine Multiple Indicator Cluster Survey 2012 results ignored by working group. Survey results for children aged 18-29 months reflect late vaccination. Survey coverage by 12 months support reported coverage levels. Estimate challenged by: S-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2013: Estimate based on extrapolation from data reported by national government. Estimate challenged by: S-

Ukraine - DTP1



| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 99 | 97 | 99 | 98 | 98 | 99 | 90 | 71 | 52 | 50 | 76 | 90 |
| Estimate GoC | ● | ● | ● | ● | ●● | ● | ● | ● | ● | ● | ● | ● |
| Official | 97 | NA | NA | 95 | NA | NA | NA | NA | NA | 46 | 42 | NA |
| Administrative | 97 | NA | 96 | 95 | 98 | 91 | 73 | NA | 98 | 46 | 42 | NA |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | 86 | NA | NA |

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

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

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

Description:

- 2002: DTP1 coverage estimated based on DTP3 coverage of 100. Estimate challenged by: D-R-
- 2003: Estimate based on interpolation between data reported by national government. GoC=No accepted empirical data
- 2004: DTP1 coverage estimated based on DTP3 coverage of 99. Estimate challenged by: R-
- 2005: DTP1 coverage estimated based on DTP3 coverage of 96. Estimate challenged by: R-
- 2006: Estimate based on reported administrative data. GoC=R+ D+
- 2007: DTP1 coverage estimated based on DTP3 coverage of 98. Estimate challenged by: D-R-
- 2008: Reported DTP1 coverage levels less than reported DTP3. The historical performance of the system suggests minimal dropout not only for completion of multi-dose vaccines but for all vaccines. In the absence of better data DTP1 coverage is assumed to be the same as DTP3 coverage. A 2011 external review of Ukraine's National Immunization Programme reports that programme performance in Ukraine begin to decline in previous years due to vaccine stock-outs, excessive medicalization of vaccine delivery, and the loss in public confidence in immunization. Estimate challenged by: D-R-
- 2009: Reported DTP1 coverage levels less than reported DTP3. The historical performance of the system suggests minimal dropout not only for completion of multi-dose vaccines but for all vaccines. In the absence of better data DTP1 coverage is assumed to be the same as DTP3 coverage. Estimate challenged by: S-
- 2010: Reported DTP1 coverage levels less than reported DTP3. The historical performance of the system suggests minimal dropout not only for completion of multi-dose vaccines but for all vaccines. In the absence of better data DTP1 coverage is assumed to be the same as DTP3 coverage. Estimate challenged by: D-R-S-
- 2011: Reported DTP1 coverage levels less than reported DTP3. The historical performance of the system suggests minimal dropout not only for completion of multi-dose vaccines but for all vaccines. In the absence of better data DTP1 coverage is assumed to be the same as DTP3 coverage. Ukraine Multiple Indicator Cluster Survey 2012 results ignored by working group. Survey results for children aged 18-29 months reflect late vaccination. Survey coverage by 12 months support reported coverage levels. Estimate challenged by: R-S-
- 2012: Reported DTP1 coverage levels less than reported DTP3. The historical performance of the system suggests minimal dropout not only for completion of multi-dose vaccines but for all vaccines. In the absence of better data

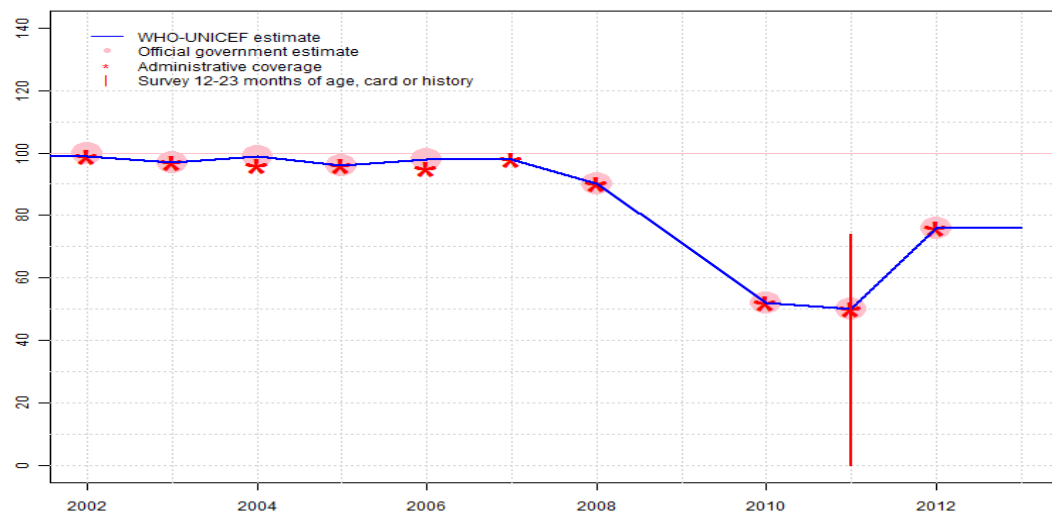
Ukraine - DTP1

DTP1 coverage is assumed to be the same as DTP3 coverage. Estimate challenged by: D-R-S-

2013: DTP1 coverage estimated based on DTP3 coverage of 76. Estimate challenged by: S-

Ukraine - DTP3

UKR - DTP3



| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 99 | 97 | 99 | 96 | 98 | 98 | 90 | 71 | 52 | 50 | 76 | 76 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 100 | 97 | 99 | 96 | 98 | NA | 90 | NA | 52 | 50 | 76 | NA |
| Administrative | 99 | 97 | 96 | 96 | 95 | 98 | 90 | NA | 52 | 50 | 76 | NA |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | 74 | NA | NA |

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

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

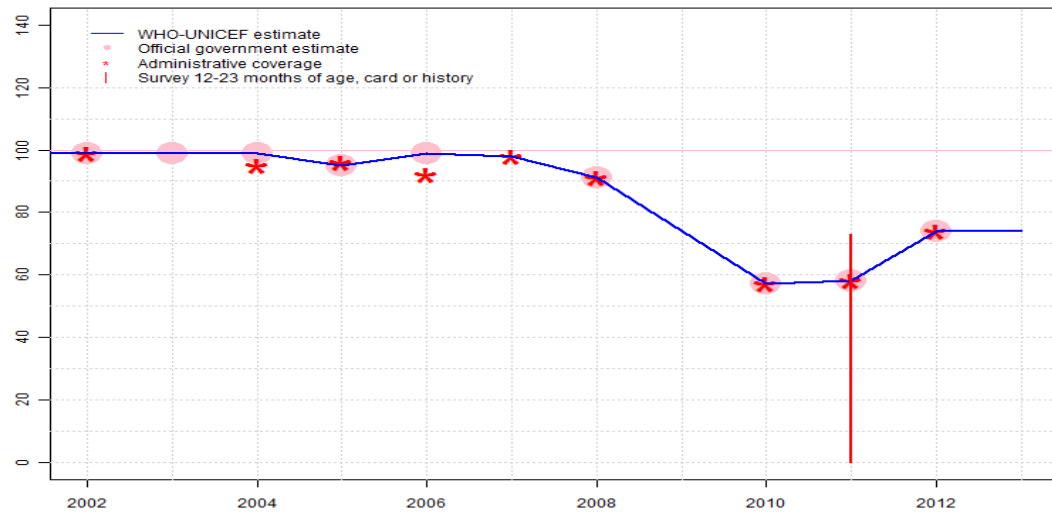
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on reported administrative data. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. A 2011 external review of Ukraine's National Immunization Programme reports that programme performance in Ukraine begin to decline in previous years due to vaccine stock-outs, excessive medicalization of vaccine delivery, and the loss in public confidence in immunization. GoC=R+ D+
- 2009: Estimate based on interpolation between data reported by national government. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Ukraine Multiple Indicator Cluster Survey 2012 results ignored by working group. Survey results for children aged 18-29 months reflect late vaccination. Survey coverage by 12 months support reported coverage levels. Ukraine Multiple Indicator Cluster Survey 2012 card or history results of 74 percent modified for recall bias to 76 percent based on 1st dose card or history coverage of 86 percent, 1st dose card only coverage of 82 percent and 3d dose card only coverage of 72 percent. Estimate challenged by: D-S-
- 2012: Estimate based on coverage reported by national government. Increase in coverage likely represents restoration of public confidence in the national immunization system and improved vaccine supply. Estimate challenged by: S-
- 2013: Estimate based on extrapolation from data reported by national government. Estimate challenged by: S-

Ukraine - Pol3

UKR - Pol3



| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 99 | 99 | 99 | 95 | 99 | 98 | 91 | 74 | 57 | 58 | 74 | 74 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 99 | 99 | 99 | 95 | 99 | NA | 91 | NA | 57 | 58 | 74 | NA |
| Administrative | 99 | NA | 95 | 96 | 92 | 98 | 91 | NA | 57 | 58 | 74 | NA |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | 73 | NA | NA |

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

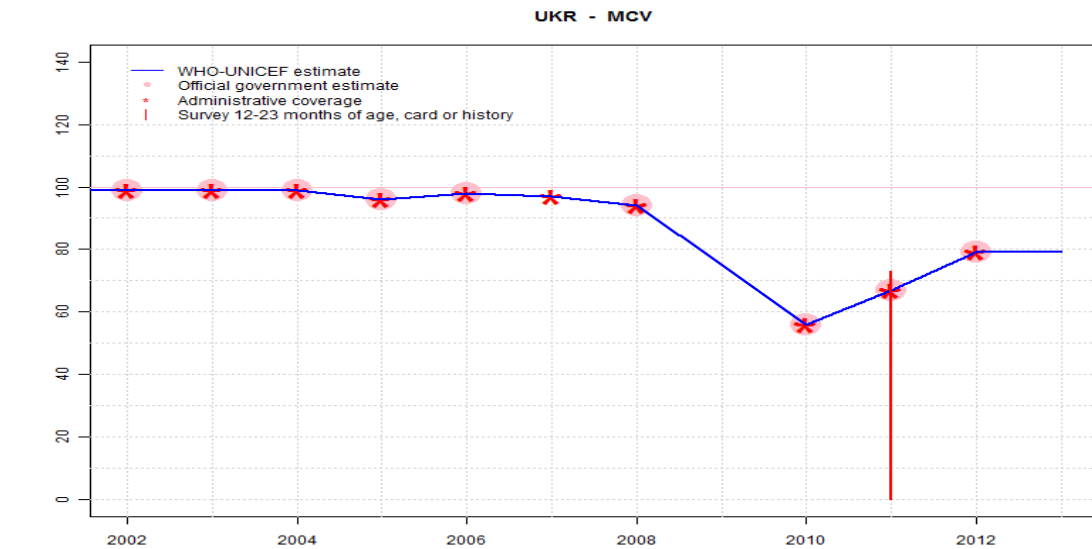
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on reported administrative data. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. A 2011 external review of Ukraine's National Immunization Programme reports that programme performance in Ukraine begin to decline in previous years due to vaccine stock-outs, excessive medicalization of vaccine delivery, and the loss in public confidence in immunization. GoC=R+ D+
- 2009: Estimate based on interpolation between data reported by national government. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Ukraine Multiple Indicator Cluster Survey 2012 results ignored by working group. Survey results for children aged 18-29 months reflect late vaccination. Survey coverage by 12 months support reported coverage levels. Ukraine Multiple Indicator Cluster Survey 2012 card or history results of 73 percent modified for recall bias to 75 percent based on 1st dose card or history coverage of 85 percent, 1st dose card only coverage of 81 percent and 3d dose card only coverage of 71 percent. Estimate challenged by: D-S-
- 2012: Estimate based on coverage reported by national government. Increase in coverage likely represents restoration of public confidence in the national immunization system and improved vaccine supply. Estimate challenged by: S-
- 2013: Estimate based on extrapolation from data reported by national government. Estimate challenged by: S-

Ukraine - MCV



| | | | | | | | | | | | | |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| Estimate | 99 | 99 | 99 | 96 | 98 | 97 | 94 | 75 | 56 | 67 | 79 | 79 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 99 | 99 | 99 | 96 | 98 | NA | 94 | NA | 56 | 67 | 79 | NA |
| Administrative | 99 | 99 | 99 | 96 | 98 | 97 | 94 | NA | 56 | 67 | 79 | NA |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | 73 | NA | NA |

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

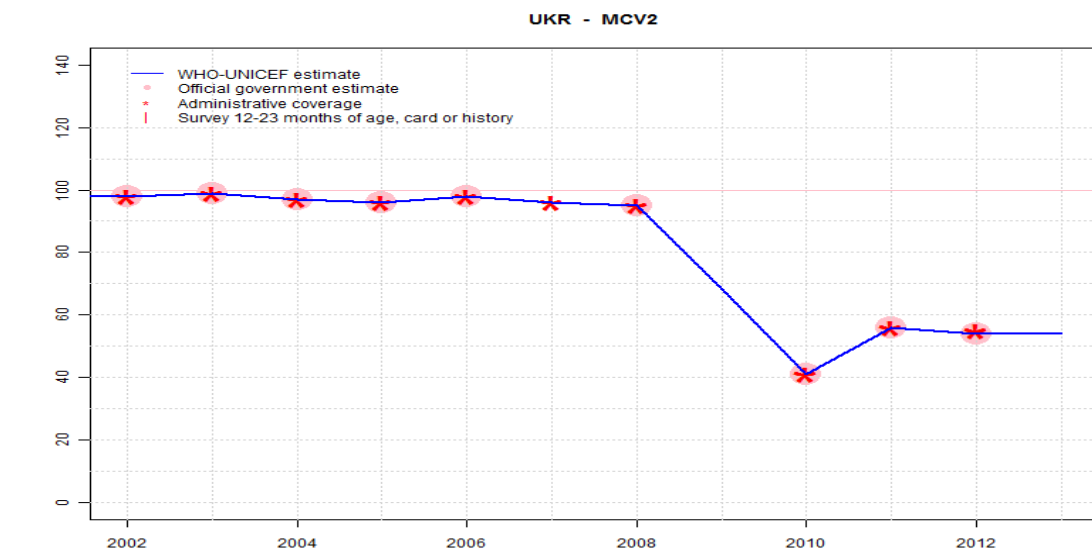
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on reported administrative data. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. A 2011 external review of Ukraine's National Immunization Programme reports that programme performance in Ukraine begin to decline in previous years due to vaccine stock-outs, excessive medicalization of vaccine delivery, and the loss in public confidence in immunization. GoC=R+ D+
- 2009: Estimate based on interpolation between data reported by national government. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Ukraine Multiple Indicator Cluster Survey 2012 results ignored by working group. Survey results for children aged 18-29 months reflect late vaccination. Survey coverage by 12 months support reported coverage levels. Estimate challenged by: S-
- 2012: Estimate based on coverage reported by national government. Increase in coverage likely represents restoration of public confidence in the national immunization system and improved vaccine supply. Estimate challenged by: S-
- 2013: Estimate based on extrapolation from data reported by national government. Estimate challenged by: S-

Ukraine - MCV2



| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 98 | 99 | 97 | 96 | 98 | 96 | 95 | 68 | 41 | 56 | 54 | 54 |
| Estimate GoC | • | • | •• | •• | • | • | • | • | • | • | • | • |
| Official | 98 | 99 | 97 | 96 | 98 | NA | 95 | NA | 41 | 56 | 54 | NA |
| Administrative | 98 | 99 | 97 | 96 | 98 | 96 | 95 | NA | 41 | 56 | 55 | 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.

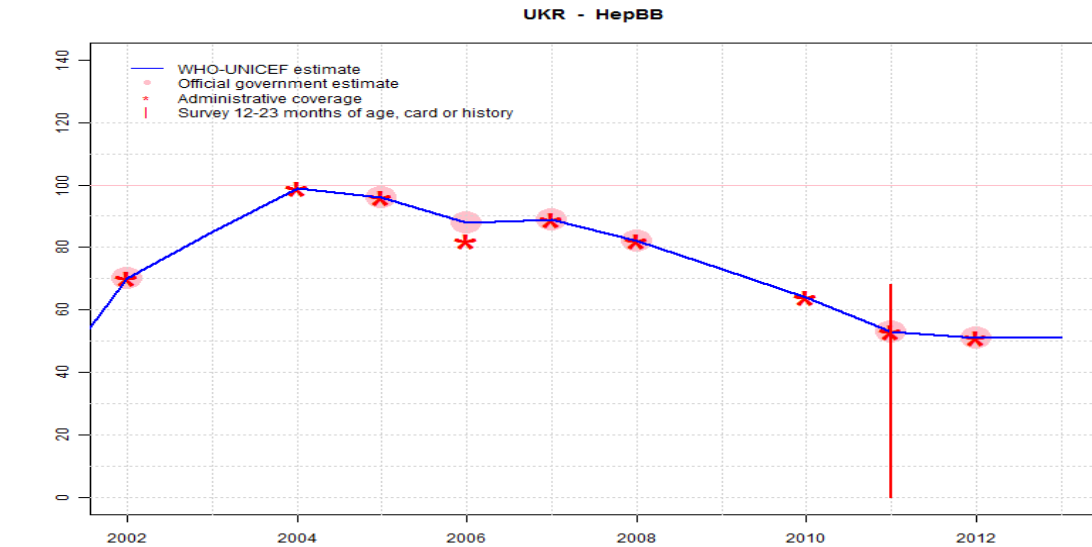
In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

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

- 2002: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2003: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2004: Estimate based on coverage reported by national government. GoC=R+D+
- 2005: Estimate based on coverage reported by national government. GoC=R+D+
- 2006: Estimate based on coverage reported by national government. Estimate challenged by: D-
- 2007: Estimate based on reported administrative estimate. Estimate challenged by: D-
- 2008: Estimate based on coverage reported by national government. A 2011 external review of Ukraine's National Immunization Programme reports that programme performance in Ukraine begin to decline in previous years due to vaccine stock-outs, excessive medicalization of vaccine delivery, and the loss in public confidence in immunization. Estimate challenged by: D-
- 2009: Estimate based on interpolation between reported values. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: D-S-
- 2013: Estimate based on extrapolation from data reported by national government. Estimate challenged by: S-

Ukraine - HepBB



| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 70 | 85 | 99 | 96 | 88 | 89 | 82 | 73 | 64 | 53 | 51 | 51 |
| Estimate GoC | •• | • | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 70 | NA | NA | 96 | 88 | 89 | 82 | NA | NA | 53 | 51 | NA |
| Administrative | 70 | NA | 99 | 96 | 82 | 89 | 82 | NA | 64 | 53 | 51 | NA |
| Survey | NA | NA | NA | NA | NA | NA | NA | NA | NA | 68 | NA | NA |

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

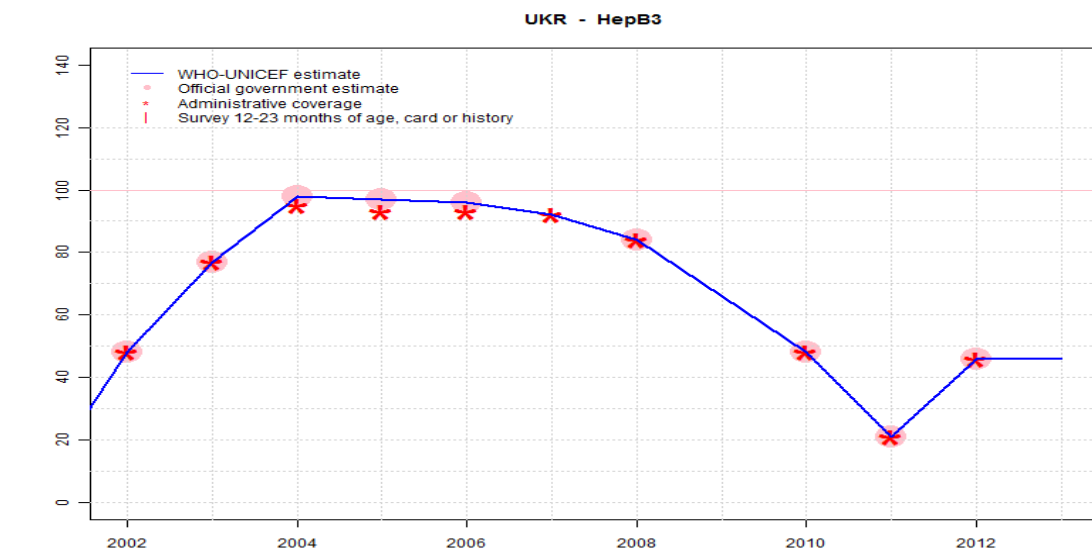
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

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

Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2004: Estimate based on reported administrative estimate. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on coverage reported by national government. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. A 2011 external review of Ukraine's National Immunization Programme reports that programme performance in Ukraine begin to decline in previous years due to vaccine stock-outs, excessive medicalization of vaccine delivery, and the loss in public confidence in immunization. GoC=R+ D+
- 2009: Estimate based on interpolation between reported values. Estimate challenged by: S-
- 2010: Estimate based on reported administrative estimate. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Ukraine Multiple Indicator Cluster Survey 2012 results ignored by working group. Survey results for children aged 18-29 months reflect late vaccination. Survey coverage by 12 months support reported coverage levels. Estimate challenged by: S-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2013: Estimate based on extrapolation from data reported by national government. Estimate challenged by: S-

Ukraine - HepB3



| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | 48 | 77 | 98 | 97 | 96 | 92 | 84 | 66 | 48 | 21 | 46 | 46 |
| Estimate GoC | •• | •• | •• | •• | •• | •• | •• | • | • | • | • | • |
| Official | 48 | 77 | 98 | 97 | 96 | NA | 84 | NA | 48 | 21 | 46 | NA |
| Administrative | 48 | 77 | 95 | 93 | 93 | 92 | 84 | NA | 48 | 21 | 46 | 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.

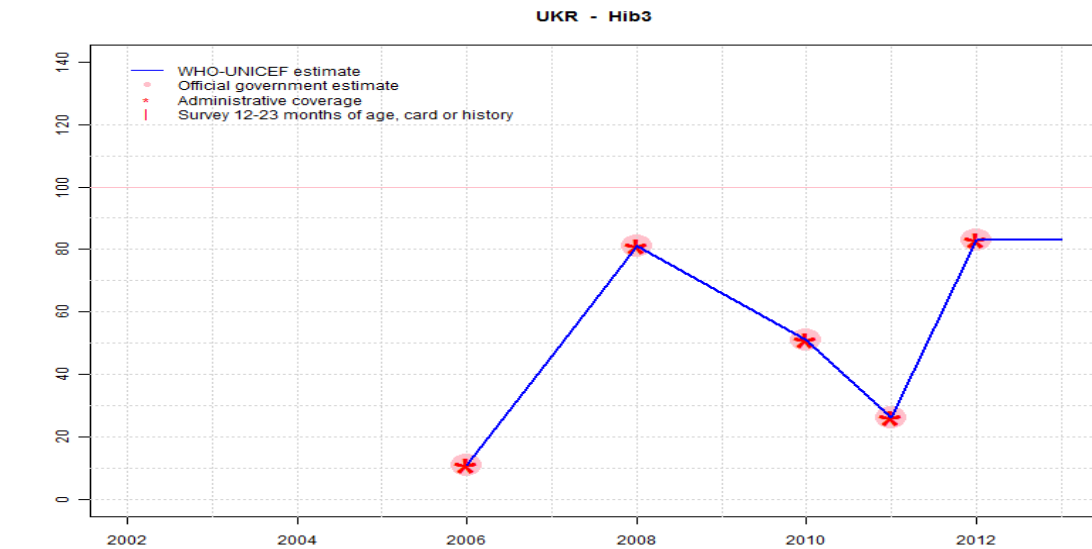
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

Description:

- 2002: Estimate based on coverage reported by national government. GoC=R+ D+
- 2003: Estimate based on coverage reported by national government. GoC=R+ D+
- 2004: Estimate based on coverage reported by national government. GoC=R+ D+
- 2005: Estimate based on coverage reported by national government. GoC=R+ D+
- 2006: Estimate based on coverage reported by national government. GoC=R+ D+
- 2007: Estimate based on reported administrative estimate. GoC=R+ D+
- 2008: Estimate based on coverage reported by national government. A 2011 external review of Ukraine's National Immunization Programme reports that programme performance in Ukraine begin to decline in previous years due to vaccine stock-outs, excessive medicalization of vaccine delivery, and the loss in public confidence in immunization. GoC=R+ D+
- 2009: Estimate based on interpolation between reported values. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Increase in coverage likely represents restoration of public confidence in the national immunization system and improved vaccine supply. Estimate challenged by: D-S-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2013: Estimate based on extrapolation from data reported by national government. Estimate challenged by: S-

Ukraine - Hib3



| | | | | | | | | | | | | |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| Estimate | NA | NA | NA | NA | 11 | 46 | 81 | 66 | 51 | 26 | 83 | 83 |
| Estimate GoC | NA | NA | NA | NA | ●● | ● | ●● | ● | ● | ● | ● | ● |
| Official | NA | NA | NA | NA | 11 | NA | 81 | NA | 51 | 26 | 83 | NA |
| Administrative | NA | NA | NA | NA | 11 | NA | 81 | NA | 51 | 26 | 83 | 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.

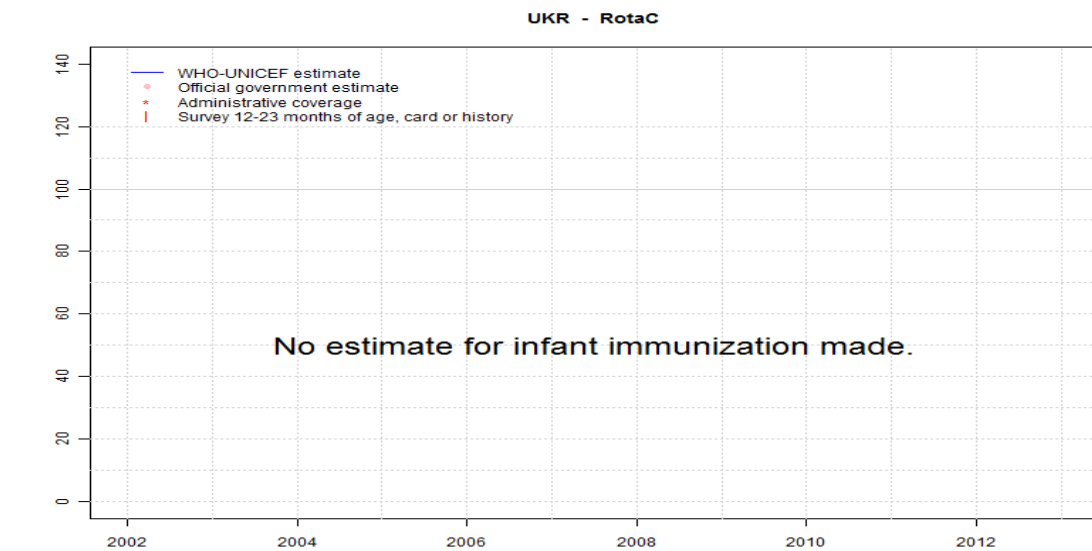
- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2012 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk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

Description:

- 2006: Estimate based on coverage reported by national government. Hib vaccine introduced in 2006 GoC=R+ D+
- 2007: Estimate based on interpolation between reported values. GoC=No accepted empirical data
- 2008: Estimate based on coverage reported by national government. A 2011 external review of Ukraine's National Immunization Programme reports that programme performance in Ukraine begin to decline in previous years due to vaccine stock-outs, excessive medicalization of vaccine delivery, and the loss in public confidence in immunization. GoC=R+ D+
- 2009: Estimate based on interpolation between reported values. Estimate challenged by: S-
- 2010: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2011: Estimate based on coverage reported by national government. Increase in coverage likely represents restoration of public confidence in the national immunization system and improved vaccine supply. Estimate challenged by: S-
- 2012: Estimate based on coverage reported by national government. Estimate challenged by: S-
- 2013: Estimate based on extrapolation from data reported by national government. Estimate challenged by: S-

Ukraine - RotaC



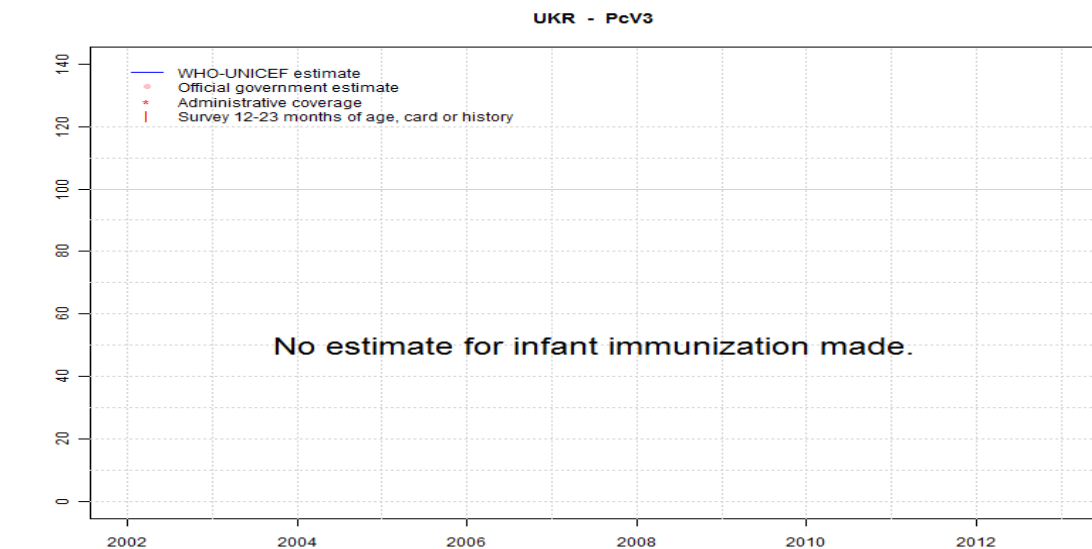
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Estimate | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Estimate GoC | NA | NA | NA | NA |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

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

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

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

Ukraine - PcV3



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

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

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

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

Ukraine - survey details

2011 Ukraine Multiple Indicator Cluster Survey 2012

| Vaccine | Confirmation method | Coverage | Age cohort | Sample | Cards seen |
|---------|---------------------|----------|------------|--------|------------|
| BCG | C or H <12 months | 94 | 18-29 m | 829 | 92 |
| BCG | Card | 90 | 18-29 m | - | 92 |
| BCG | Card or History | 95 | 18-29 m | 829 | 92 |
| BCG | History | 6 | 18-29 m | - | 92 |
| DTP1 | C or H <12 months | 79 | 18-29 m | 829 | 92 |
| DTP1 | Card | 82 | 18-29 m | - | 92 |
| DTP1 | Card or History | 86 | 18-29 m | 829 | 92 |
| DTP1 | History | 4 | 18-29 m | - | 92 |
| DTP3 | C or H <12 months | 42 | 18-29 m | 829 | 92 |
| DTP3 | Card | 72 | 18-29 m | - | 92 |
| DTP3 | Card or History | 74 | 18-29 m | 829 | 92 |
| DTP3 | History | 3 | 18-29 m | - | 92 |
| HepB1 | C or H <12 months | 54 | 18-29 m | 829 | 92 |
| HepB1 | Card | 59 | 18-29 m | - | 92 |
| HepB1 | Card or History | 69 | 18-29 m | 829 | 92 |
| HepB1 | History | 10 | 18-29 m | - | 92 |
| HepBB | C or H <12 months | 65 | 18-29 m | 829 | 92 |

| | | | | | |
|-------|-------------------|----|---------|-----|----|
| HepBB | Card | 65 | 18-29 m | - | 92 |
| HepBB | Card or History | 68 | 18-29 m | 829 | 92 |
| HepBB | History | 4 | 18-29 m | - | 92 |
| Hib1 | C or H <12 months | 75 | 18-29 m | 829 | 92 |
| Hib1 | Card | 76 | 18-29 m | - | 92 |
| Hib1 | Card or History | 80 | 18-29 m | 829 | 92 |
| Hib1 | History | 4 | 18-29 m | - | 92 |
| MCV | C or H <18 months | 63 | 18-29 m | 829 | 92 |
| MCV | Card | 66 | 18-29 m | - | 92 |
| MCV | Card or History | 73 | 18-29 m | 829 | 92 |
| MCV | History | 7 | 18-29 m | - | 92 |
| Pol1 | C or H <12 months | 79 | 18-29 m | 829 | 92 |
| Pol1 | Card | 81 | 18-29 m | - | 92 |
| Pol1 | Card or History | 85 | 18-29 m | 829 | 92 |
| Pol1 | History | 4 | 18-29 m | - | 92 |
| Pol3 | C or H <12 months | 48 | 18-29 m | 829 | 92 |
| Pol3 | Card | 71 | 18-29 m | - | 92 |
| Pol3 | Card or History | 73 | 18-29 m | 829 | 92 |
| Pol3 | History | 2 | 18-29 m | - | 92 |

Further information and estimates prior to 2002 are available at:

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

http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html