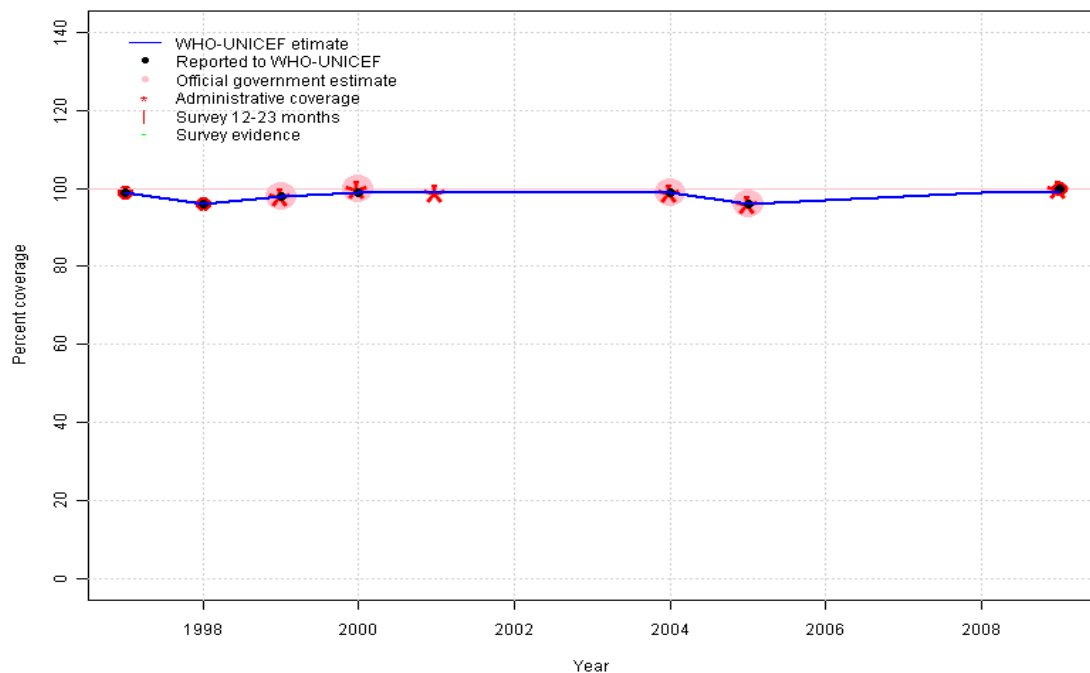


# Brunei Darussalam - BCG

BRN - BCG



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	99	96	98	99	99	99	99	99	96	97	98	99	99
Reported	99	96	98	99	NA	NA	NA	99	96	NA	NA	NA	100
Official	NA	NA	98	100	NA	NA	NA	99	96	NA	NA	NA	NA
Administrative	NA	NA	98	100	99	NA	NA	99	96	NA	NA	NA	100
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on reported data.

1999: Estimate based on reported data.

2000: Estimate based on reported data.

2001: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 99 percent in 2004.

2002: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 99 percent in 2004.

2003: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 99 percent in 2004.

2004: Estimate based on reported data.

2005: Estimate based on reported data.

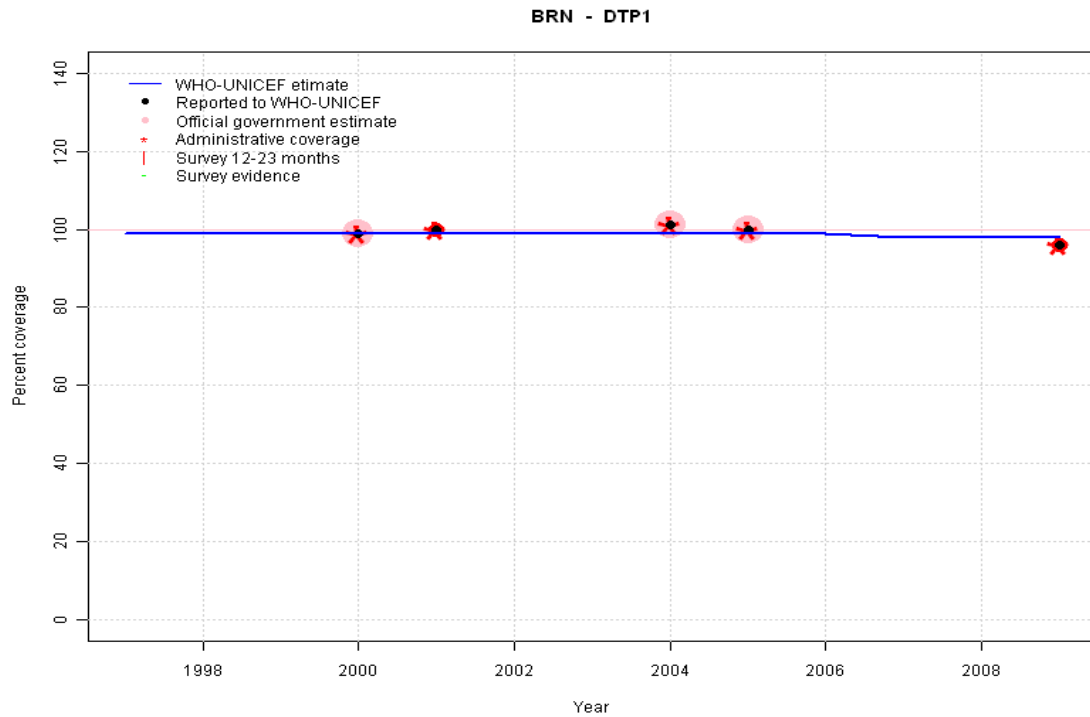
2006: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 96 percent in 2005 and 100 percent in 2009.

2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 96 percent in 2005 and 100 percent in 2009.

2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 96 percent in 2005 and 100 percent in 2009.

2009: Estimate based on reported data.

# Brunei Darussalam - DTP1



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	99	99	99	99	99	99	99	99	99	99	98	98	98
Reported	NA	NA	NA	99	100	NA	NA	101	100	NA	NA	NA	96
Official	NA	NA	NA	99	NA	NA	NA	101	100	NA	NA	NA	NA
Administrative	NA	NA	NA	99	100	NA	NA	101	100	NA	NA	NA	96
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2000 reported value of 99 percent.

1999: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2000 reported value of 99 percent.

2000: Estimate based on reported data.

2001: Estimate based on reported data.

2002: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2001 and 100 percent in 2005.

2003: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2001 and 100 percent in 2005.

2004: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2001 and 100 percent in 2005. 2004 reported data (101 percent) ignored; greater than 100 percent.

2005: Estimate based on reported data.

2006: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2005 and 96 percent in 2009.

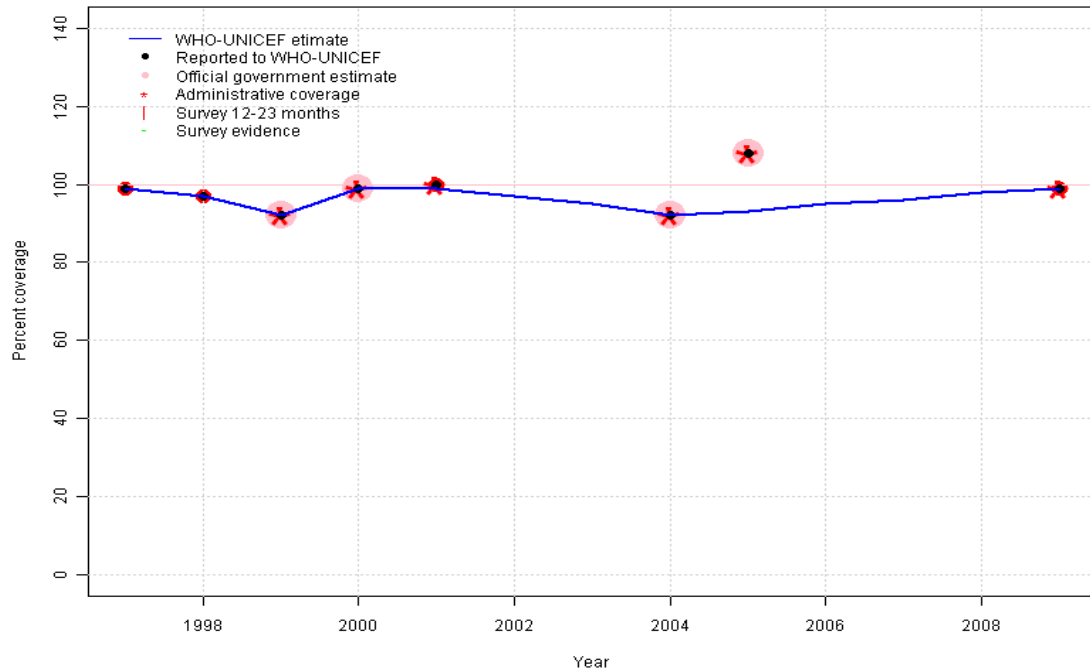
2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2005 and 96 percent in 2009.

2008: Estimated DTP3 greater than estimated DTP1; DTP1 estimate based on the relationship between DTP1 and DTP3 from 282 surveys.

2009: Estimated DTP3 greater than estimated DTP1; DTP1 estimate based on the relationship between DTP1 and DTP3 from 282 surveys.

# Brunei Darussalam - DTP3

BRN - DTP3

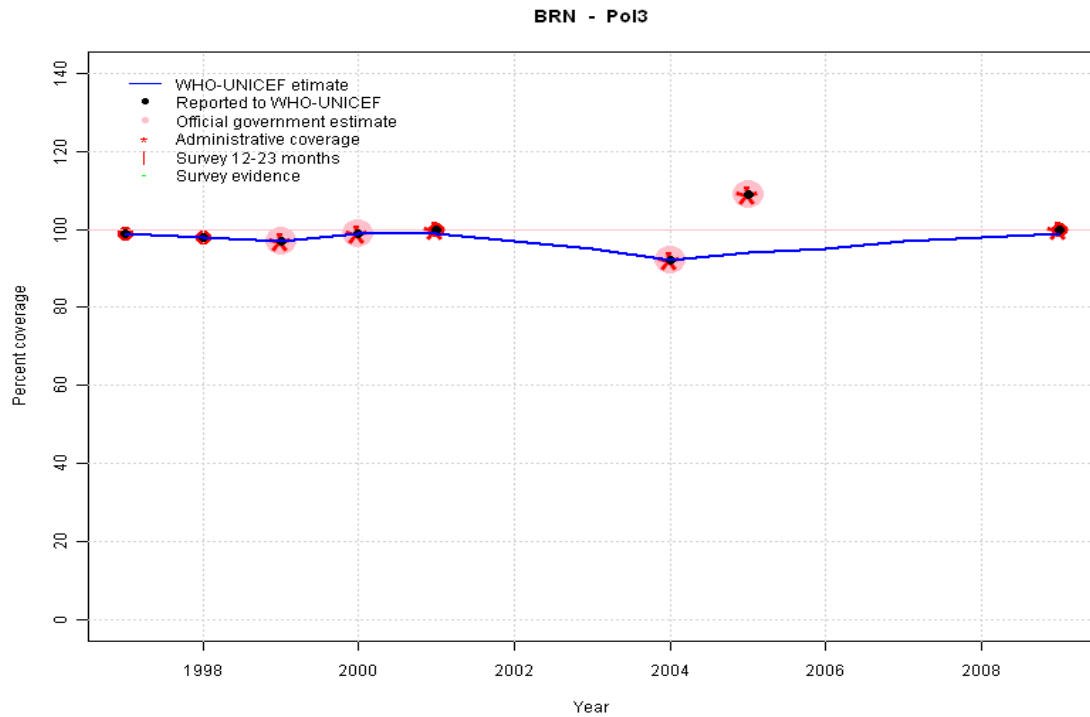


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	99	97	92	99	99	97	95	92	93	95	96	98	99
Reported	99	97	92	99	100	NA	NA	92	108	NA	NA	NA	99
Official	NA	NA	92	99	NA	NA	NA	92	108	NA	NA	NA	NA
Administrative	NA	NA	92	99	100	NA	NA	92	108	NA	NA	NA	99
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## Description:

- 1997: Legacy estimate.
- 1998: Estimate based on reported data.
- 1999: Estimate based on reported data.
- 2000: Estimate based on reported data.
- 2001: Estimate based on reported data.
- 2002: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2001 and 92 percent in 2004.
- 2003: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2001 and 92 percent in 2004.
- 2004: Estimate based on reported data.
- 2005: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 99 percent in 2009. 2005 reported data (108 percent) ignored; greater than 100 percent.
- 2006: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 99 percent in 2009.
- 2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 99 percent in 2009.
- 2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 99 percent in 2009.
- 2009: Estimate based on reported data.

# Brunei Darussalam - Pol3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	99	98	97	99	99	97	95	92	94	95	97	98	99
Reported	99	98	97	99	100	NA	NA	92	109	NA	NA	NA	100
Official	NA	NA	97	99	NA	NA	NA	92	109	NA	NA	NA	NA
Administrative	NA	NA	97	99	100	NA	NA	92	109	NA	NA	NA	100
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on reported data.

1999: Estimate based on reported data.

2000: Estimate based on reported data.

2001: Estimate based on reported data.

2002: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2001 and 92 percent in 2004.

2003: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 100 percent in 2001 and 92 percent in 2004.

2004: Estimate based on reported data.

2005: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 100 percent in 2009. 2005 reported data (109 percent) ignored; greater than 100 percent.

2006: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 100 percent in 2009.

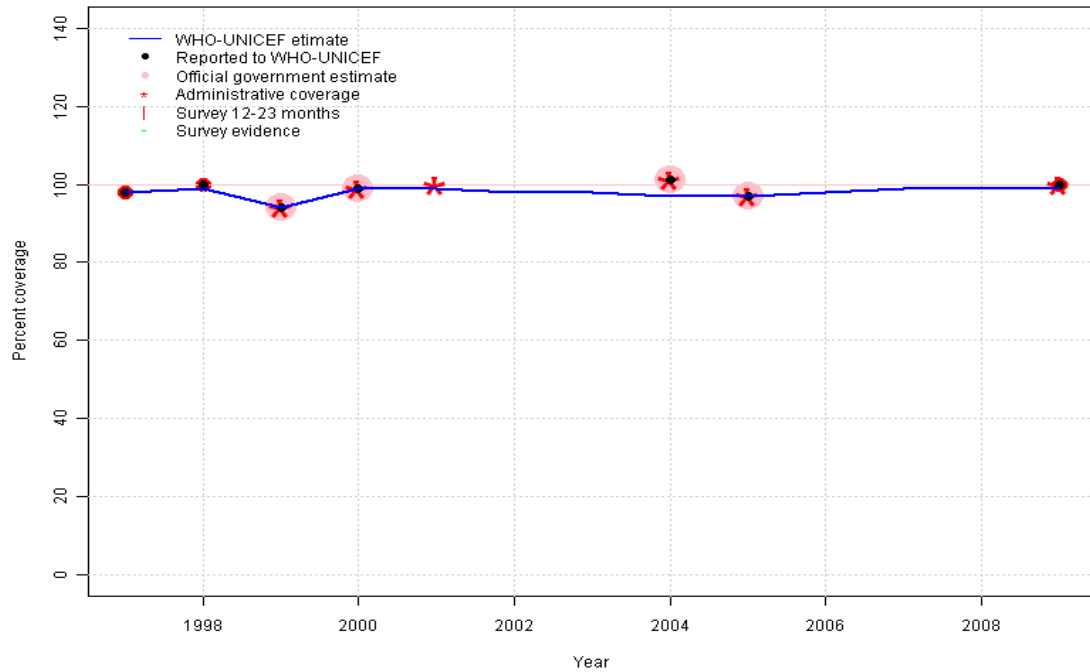
2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 100 percent in 2009.

2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 100 percent in 2009.

2009: Estimate based on reported data.

# Brunei Darussalam - MCV

BRN - MCV



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	98	100	94	99	99	98	98	97	97	98	99	99	99
Reported	98	100	94	99	NA	NA	NA	101	97	NA	NA	NA	100
Official	NA	NA	94	99	NA	NA	NA	101	97	NA	NA	NA	NA
Administrative	NA	NA	94	99	100	NA	NA	101	97	NA	NA	NA	100
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## Description:

1997: Legacy estimate.

1998: Estimate based on reported data.

1999: Estimate based on reported data.

2000: Estimate based on reported data.

2001: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 97 percent in 2005.

2002: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 97 percent in 2005.

2003: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 97 percent in 2005.

2004: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 97 percent in 2005. 2004 reported data (101 percent) ignored; greater than 100 percent.

2005: Estimate based on reported data.

2006: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 97 percent in 2005 and 100 percent in 2009.

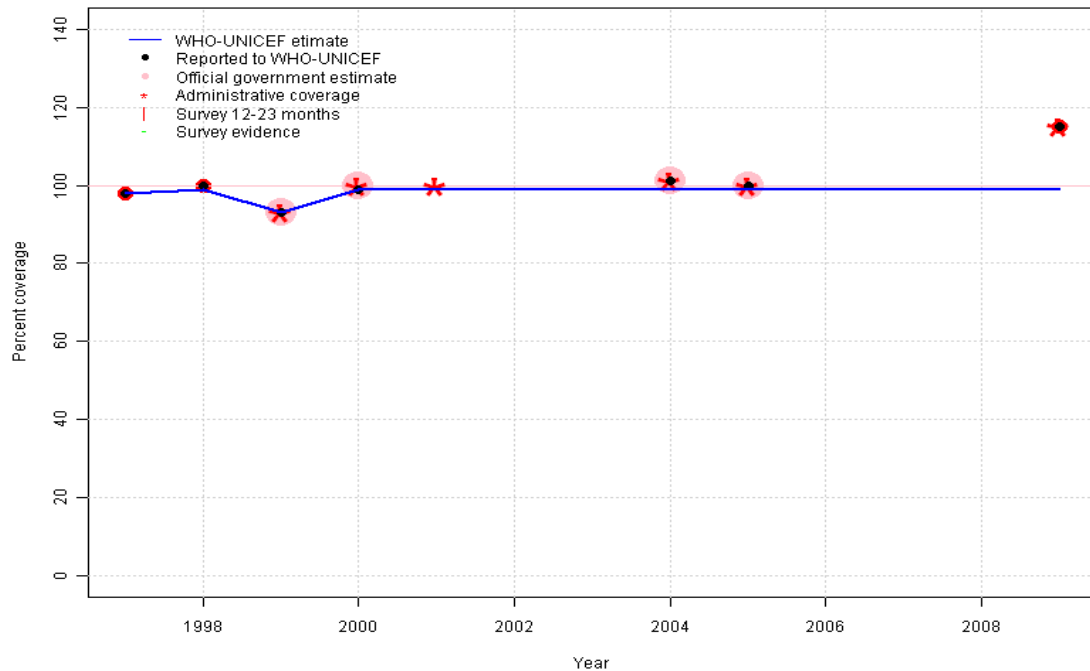
2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 97 percent in 2005 and 100 percent in 2009.

2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 97 percent in 2005 and 100 percent in 2009.

2009: Estimate based on reported data.

# Brunei Darussalam - HepB3

BRN - HepB3

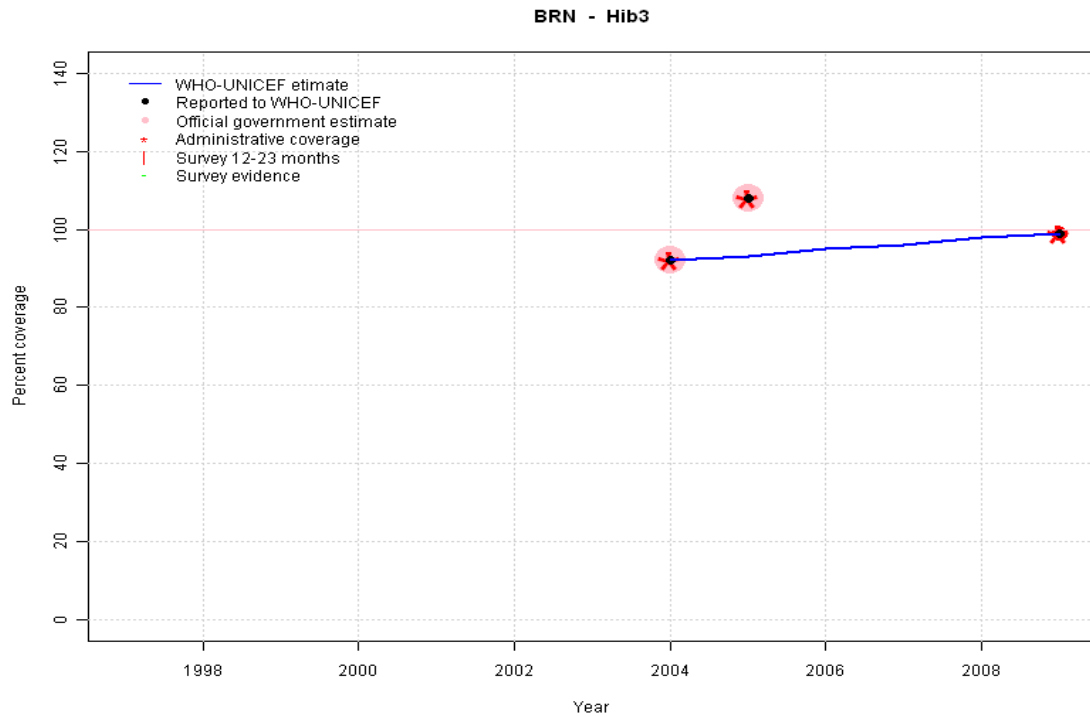


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	98	99	93	99	99	99	99	99	99	99	99	99	99
Reported	98	100	93	99	NA	NA	NA	101	100	NA	NA	NA	115
Official	NA	NA	93	100	NA	NA	NA	101	100	NA	NA	NA	NA
Administrative	NA	NA	93	100	100	NA	NA	101	100	NA	NA	NA	115
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## Description:

- 1997: Legacy estimate.
- 1998: Estimate based on reported data.
- 1999: Estimate based on reported data.
- 2000: Estimate based on reported data.
- 2001: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 100 percent in 2005.
- 2002: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 100 percent in 2005.
- 2003: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 100 percent in 2005.
- 2004: Estimate based on trend in reported data. Missing or ignored reported value estimated by interpolation between reported values of 99 percent in 2000 and 100 percent in 2005. 2004 reported data (101 percent) ignored; greater than 100 percent.
- 2005: Estimate based on reported data.
- 2006: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2005 reported value of 99 percent.
- 2007: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2005 reported value of 99 percent.
- 2008: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2005 reported value of 99 percent.
- 2009: Estimate based on trend in reported data. Missing or ignored reported value estimated by extrapolation from 2005 reported value of 99 percent. 2009 reported data (115 percent) ignored; greater than 100 percent.

# Brunei Darussalam - Hib3

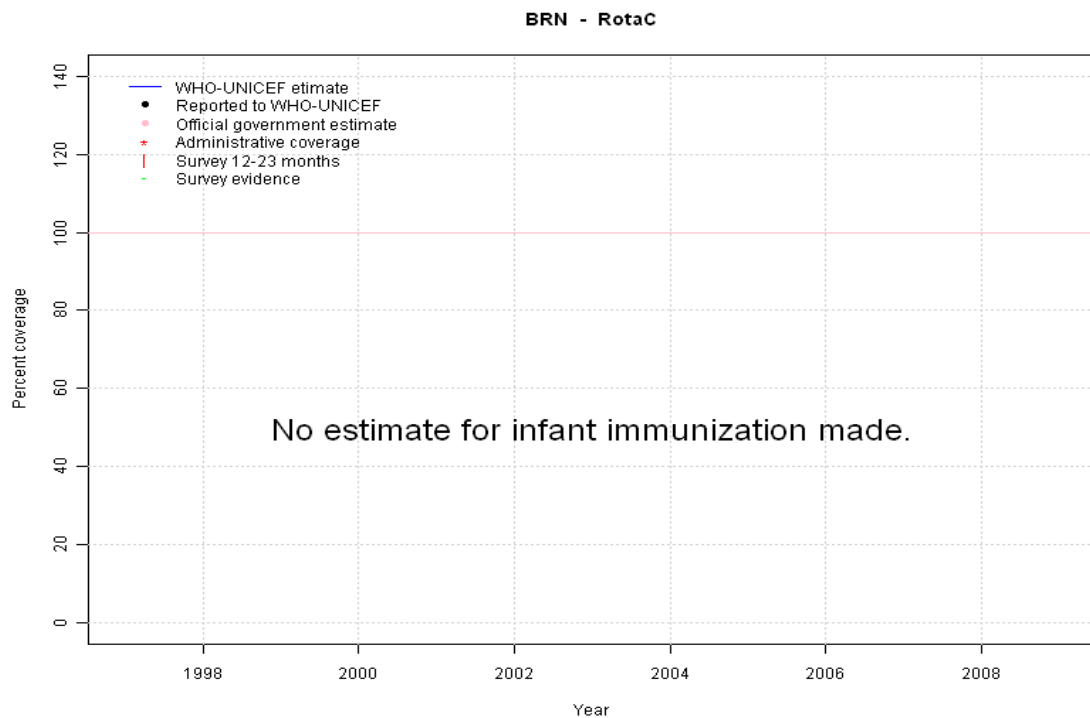


## Description:

- 2004: Estimate based on reported data. Hib introduced in 2002. Reporting started in 2004. Vaccine presentation is DTB-Hib.
- 2005: Estimate based on reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 99 percent in 2009. 2005 reported data (108 percent) ignored; greater than 100 percent.
- 2006: Estimate based on reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 99 percent in 2009.
- 2007: Estimate based on reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 99 percent in 2009.
- 2008: Estimate based on reported data. Missing or ignored reported value estimated by interpolation between reported values of 92 percent in 2004 and 99 percent in 2009.
- 2009: Estimate based on reported data.

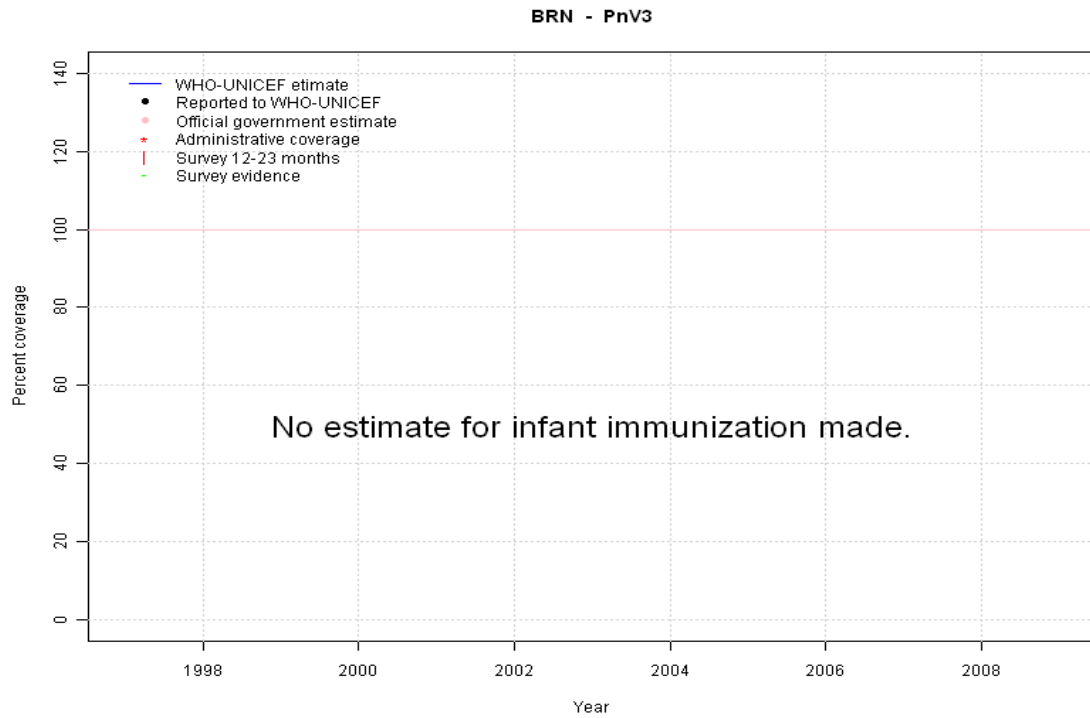
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	92	93	95	96	98	99
Reported	NA	NA	NA	NA	NA	NA	NA	92	108	NA	NA	NA	99
Official	NA	NA	NA	NA	NA	NA	NA	92	108	NA	NA	NA	NA
Administrative	NA	NA	NA	NA	NA	NA	NA	92	108	NA	NA	NA	99
Survey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

# Brunei Darussalam - RotaC



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	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	NA
Administrative	NA	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	NA

# Brunei Darussalam - PnV3



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Reported	NA	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	NA
Administrative	NA	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	NA

Further information and estimates for 1980-1996 are available at:

[http://www.childinfo.org/immunization\\_countryreports.html](http://www.childinfo.org/immunization_countryreports.html)

[http://www.who.int/immunization\\_monitoring/routine/immunization\\_coverage/en/index4.html](http://www.who.int/immunization_monitoring/routine/immunization_coverage/en/index4.html)

## Brunei Darussalam

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

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

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

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

Year	PAB coverage estimate (%)
1997	79
1998	66
1999	62
2000	77
2001	78
2002	79
2003	80
2004	68
2005	64
2006	64
2007	64
2008	65
2009	65

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<sup>1</sup> This model is described in: Griffiths U., Wolfson L., Quddus A., Younus M., Hafiz R.. Incremental cost-effectiveness of supplementary immunization activities to prevent neo-natal tetanus in Pakistan. Bulletin of the World Health Organization 2004; 82:643-651.