

**WHO/UNICEF  
Review of National Immunization Coverage  
1980-2008**

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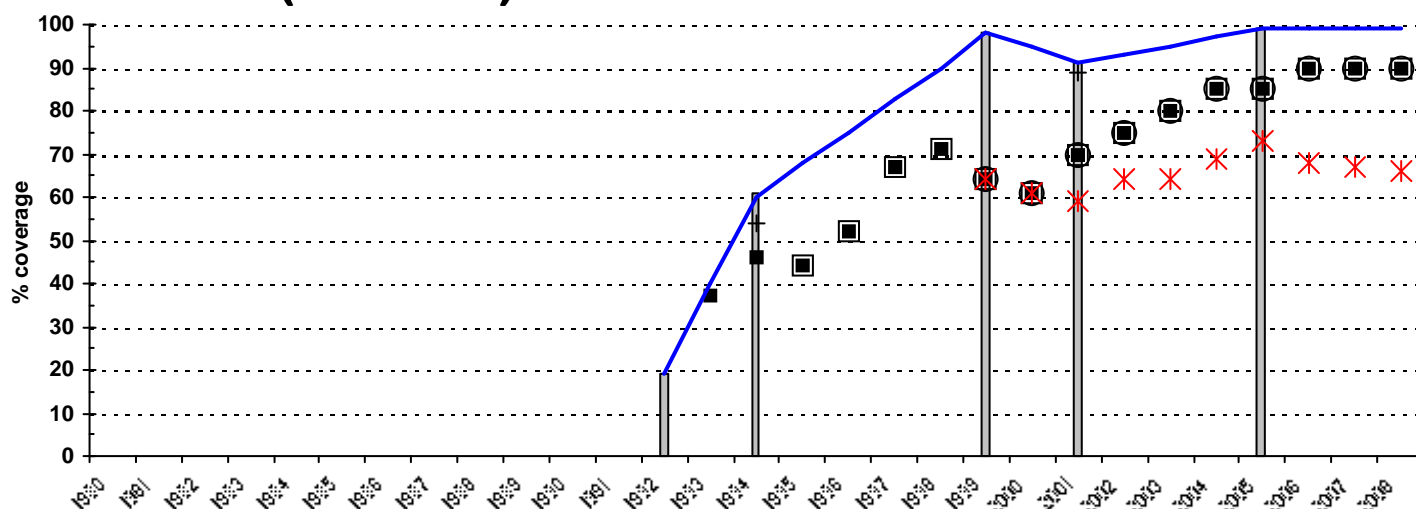
***Eritrea***

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**July, 2009**

# Eritrea

## BCG (1980-2008)



### Description of trend

Estimates are based on survey data.

### Data presented in chart

| Year | WHO/<br>UNICEF<br>estimate<br>(%) | Reported to:* |               | Government<br>official<br>estimate<br>(%) | Reported<br>doses<br>administered<br>(%)** | Survey data (%)***        |                         |
|------|-----------------------------------|---------------|---------------|---|--|---------------------------|-------------------------|
|      |                                   | WHO<br>(%)    | UNICEF<br>(%) |   |  | Survey<br>12-23<br>months | Survey<br><12<br>months |
|      | —                                 | □             | ■             | ○   | ×  | ▮                         | +                       |
| 1980 |                                   |               |               |   |  |                           |                         |
| 1981 |                                   |               |               |   |  |                           |                         |
| 1982 |                                   |               |               |   |  |                           |                         |
| 1983 |                                   |               |               |   |  |                           |                         |
| 1984 |                                   |               |               |   |  |                           |                         |
| 1985 |                                   |               |               |   |  |                           |                         |
| 1986 |                                   |               |               |   |  |                           |                         |
| 1987 |                                   |               |               |   |  |                           |                         |
| 1988 |                                   |               |               |   |  |                           |                         |
| 1989 |                                   |               |               |   |  |                           |                         |
| 1990 |                                   |               |               |   |  |                           |                         |
| 1991 |                                   |               |               |   |  |                           |                         |
| 1992 | 19                                |               |               |   |  | 19                        |                         |
| 1993 | 40                                |               | 37            |   |  |                           |                         |
| 1994 | 60                                |               | 46            |   |  | 61                        | 54                      |
| 1995 | 68                                | 44            | 44            |   |  |                           |                         |
| 1996 | 75                                | 52            | 52            |   |  |                           |                         |
| 1997 | 83                                | 67            | 67            |   |  |                           |                         |
| 1998 | 90                                | 71            | 71            |   |  |                           |                         |
| 1999 | 98                                | 64            | 64            | 64  | 64   | 98                        |                         |
| 2000 | 95                                | 61            | 61            | 61  | 61   |                           |                         |
| 2001 | 91                                | 70            | 70            | 70  | 59   | 91                        | 89                      |
| 2002 | 93                                | 75            | 75            | 75  | 64   |                           |                         |
| 2003 | 95                                | 80            | 80            | 80  | 64   |                           |                         |
| 2004 | 97                                | 85            | 85            | 85  | 69   |                           |                         |
| 2005 | 99                                | 85            | 85            | 85  | 73   | 99                        |                         |
| 2006 | 99                                | 90            | 90            | 90  | 68   |                           |                         |
| 2007 | 99                                | 90            | 90            | 90  | 67   |                           |                         |
| 2008 | 99                                | 90            | 90            | 90  | 66   |                           |                         |

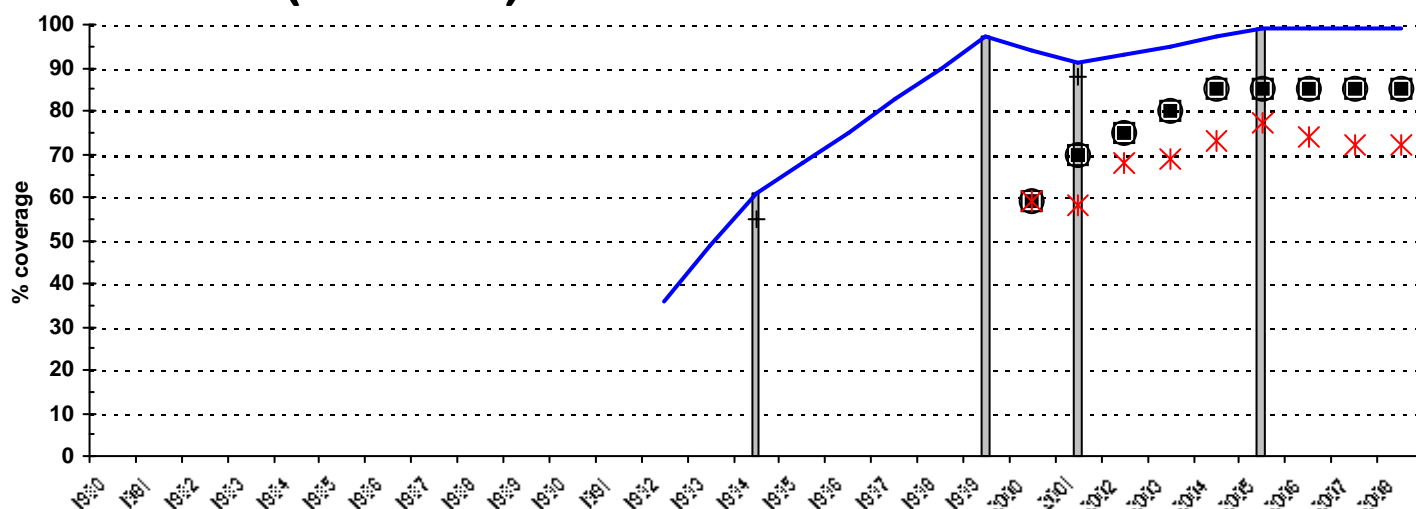
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Eritrea

## DTP1 (1980-2008)



### Description of trend

WHO and UNICEF began requesting data on DTP1 coverage in 2001 and have received national reports reflecting DTP1 coverage from 2001 onward. Estimates are based on survey data.

### Data presented in chart

| Year | WHO/<br>UNICEF<br>estimate<br>(%) | Reported to:*   |                    | Government<br>official<br>estimate<br>(%) | Reported<br>doses<br>administered<br>(%)** | Survey data (%)***             |                              |
|------|-----------------------------------|-----------------|--------------------|---|--|--------------------------------|------------------------------|
|      |                                   | WHO<br>(%)<br>□ | UNICEF<br>(%)<br>■ |   |  | Survey<br>12-23<br>months<br>▮ | Survey<br><12<br>months<br>+ |
| 1980 |                                   |                 |                    |   |  |                                |                              |
| 1981 |                                   |                 |                    |   |  |                                |                              |
| 1982 |                                   |                 |                    |   |  |                                |                              |
| 1983 |                                   |                 |                    |   |  |                                |                              |
| 1984 |                                   |                 |                    |   |  |                                |                              |
| 1985 |                                   |                 |                    |   |  |                                |                              |
| 1986 |                                   |                 |                    |   |  |                                |                              |
| 1987 |                                   |                 |                    |   |  |                                |                              |
| 1988 |                                   |                 |                    |   |  |                                |                              |
| 1989 |                                   |                 |                    |   |  |                                |                              |
| 1990 |                                   |                 |                    |   |  |                                |                              |
| 1991 |                                   |                 |                    |   |  |                                |                              |
| 1992 | 36                                |                 |                    |   |  |                                |                              |
| 1993 | 49                                |                 |                    |   |  |                                |                              |
| 1994 | 61                                |                 |                    |   |  | 61                             | 55                           |
| 1995 | 68                                |                 |                    |   |  |                                |                              |
| 1996 | 75                                |                 |                    |   |  |                                |                              |
| 1997 | 83                                |                 |                    |   |  |                                |                              |
| 1998 | 90                                |                 |                    |   |  |                                |                              |
| 1999 | 97                                |                 |                    |   |  | 97                             |                              |
| 2000 | 94                                | 59              | 59                 | 59  | 59   |                                |                              |
| 2001 | 91                                | 70              | 70                 | 70  | 58   | 91                             | 88                           |
| 2002 | 93                                | 75              | 75                 | 75  | 68   |                                |                              |
| 2003 | 95                                | 80              | 80                 | 80  | 69   |                                |                              |
| 2004 | 97                                | 85              | 85                 | 85  | 73   |                                |                              |
| 2005 | 99                                | 85              | 85                 | 85  | 77   | 99                             |                              |
| 2006 | 99                                | 85              | 85                 | 85  | 74   |                                |                              |
| 2007 | 99                                | 85              | 85                 | 85  | 72   |                                |                              |
| 2008 | 99                                | 85              | 85                 | 85  | 72   |                                |                              |

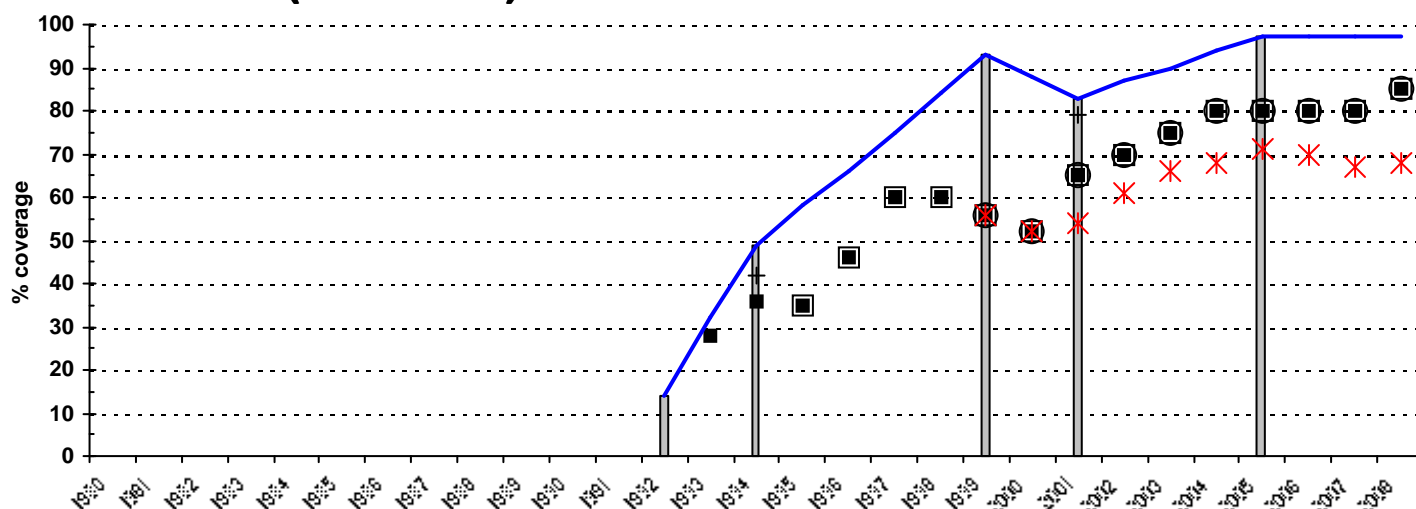
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Eritrea

## DTP3 (1980-2008)



### Description of trend

Estimates are based on survey data.

### Data presented in chart

| Year | WHO/<br>UNICEF<br>estimate<br>(%) | Reported to:* |               | Government<br>official<br>estimate<br>(%) | Reported doses<br>administered<br>(%)** | Survey data (%)***        |                         |
|------|-----------------------------------|---------------|---------------|---|---|---------------------------|-------------------------|
|      |                                   | WHO<br>(%)    | UNICEF<br>(%) |   |   | Survey<br>12-23<br>months | Survey<br><12<br>months |
| 1980 |                                   |               |               |   |   |                           |                         |
| 1981 |                                   |               |               |   |   |                           |                         |
| 1982 |                                   |               |               |   |   |                           |                         |
| 1983 |                                   |               |               |   |   |                           |                         |
| 1984 |                                   |               |               |   |   |                           |                         |
| 1985 |                                   |               |               |   |   |                           |                         |
| 1986 |                                   |               |               |   |   |                           |                         |
| 1987 |                                   |               |               |   |   |                           |                         |
| 1988 |                                   |               |               |   |   |                           |                         |
| 1989 |                                   |               |               |   |   |                           |                         |
| 1990 |                                   |               |               |   |   |                           |                         |
| 1991 |                                   |               |               |   |   |                           |                         |
| 1992 | 14                                |               |               |   |   | 14                        |                         |
| 1993 | 32                                |               | 28            |   |   |                           |                         |
| 1994 | 49                                |               | 36            |   |   | 49                        | 42                      |
| 1995 | 58                                | 35            | 35            |   |   |                           |                         |
| 1996 | 66                                | 46            | 46            |   |   |                           |                         |
| 1997 | 75                                | 60            | 60            |   |   |                           |                         |
| 1998 | 84                                | 60            | 60            |   |   |                           |                         |
| 1999 | 93                                | 56            | 56            | 56  | 56                                      | 93                        |                         |
| 2000 | 88                                | 52            | 52            | 52  | 52                                      |                           |                         |
| 2001 | 83                                | 65            | 65            | 65  | 54                                      | 83                        | 79                      |
| 2002 | 87                                | 70            | 70            | 70  | 61                                      |                           |                         |
| 2003 | 90                                | 75            | 75            | 75  | 66                                      |                           |                         |
| 2004 | 94                                | 80            | 80            | 80  | 68                                      |                           |                         |
| 2005 | 97                                | 80            | 80            | 80  | 71                                      | 97                        |                         |
| 2006 | 97                                | 80            | 80            | 80  | 70                                      |                           |                         |
| 2007 | 97                                | 80            | 80            | 80  | 67                                      |                           |                         |
| 2008 | 97                                | 85            | 85            | 85  | 68                                      |                           |                         |

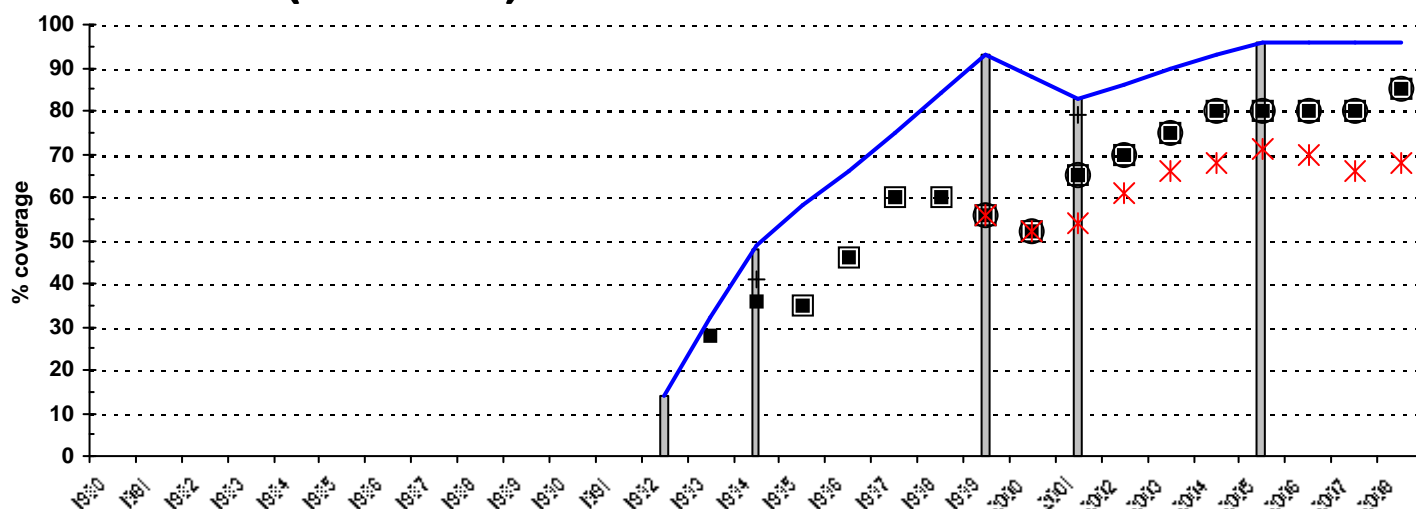
\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Eritrea

## Pol3 (1980-2008)



### Description of trend

Estimates are based on survey data.

### Data presented in chart

| Year | WHO/<br>UNICEF<br>estimate<br>(%) | Reported to:* |               | Government<br>official<br>estimate<br>(%) | Reported doses<br>administered<br>(%)** | Survey data (%)***        |                         |
|------|-----------------------------------|---------------|---------------|---|---|---------------------------|-------------------------|
|      |                                   | WHO<br>(%)    | UNICEF<br>(%) |   |   | Survey<br>12-23<br>months | Survey<br><12<br>months |
| 1980 |                                   |               |               |   |   |                           |                         |
| 1981 |                                   |               |               |   |   |                           |                         |
| 1982 |                                   |               |               |   |   |                           |                         |
| 1983 |                                   |               |               |   |   |                           |                         |
| 1984 |                                   |               |               |   |   |                           |                         |
| 1985 |                                   |               |               |   |   |                           |                         |
| 1986 |                                   |               |               |   |   |                           |                         |
| 1987 |                                   |               |               |   |   |                           |                         |
| 1988 |                                   |               |               |   |   |                           |                         |
| 1989 |                                   |               |               |   |   |                           |                         |
| 1990 |                                   |               |               |   |   |                           |                         |
| 1991 |                                   |               |               |   |   |                           |                         |
| 1992 | 14                                |               |               |   |   | 14                        |                         |
| 1993 | 32                                |               | 28            |   |   |                           |                         |
| 1994 | 49                                |               | 36            |   |   | 48                        | 41                      |
| 1995 | 58                                | 35            | 35            |   |   |                           |                         |
| 1996 | 66                                | 46            | 46            |   |   |                           |                         |
| 1997 | 75                                | 60            | 60            |   |   |                           |                         |
| 1998 | 84                                | 60            | 60            |   |   |                           |                         |
| 1999 | 93                                | 56            | 56            | 56  | 56                                      | 93                        |                         |
| 2000 | 88                                | 52            | 52            | 52  | 52                                      |                           |                         |
| 2001 | 83                                | 65            | 65            | 65  | 54                                      | 83                        | 79                      |
| 2002 | 86                                | 70            | 70            | 70  | 61                                      |                           |                         |
| 2003 | 90                                | 75            | 75            | 75  | 66                                      |                           |                         |
| 2004 | 93                                | 80            | 80            | 80  | 68                                      |                           |                         |
| 2005 | 96                                | 80            | 80            | 80  | 71                                      | 96                        |                         |
| 2006 | 96                                | 80            | 80            | 80  | 70                                      |                           |                         |
| 2007 | 96                                | 80            | 80            | 80  | 66                                      |                           |                         |
| 2008 | 96                                | 85            | 85            | 85  | 68                                      |                           |                         |

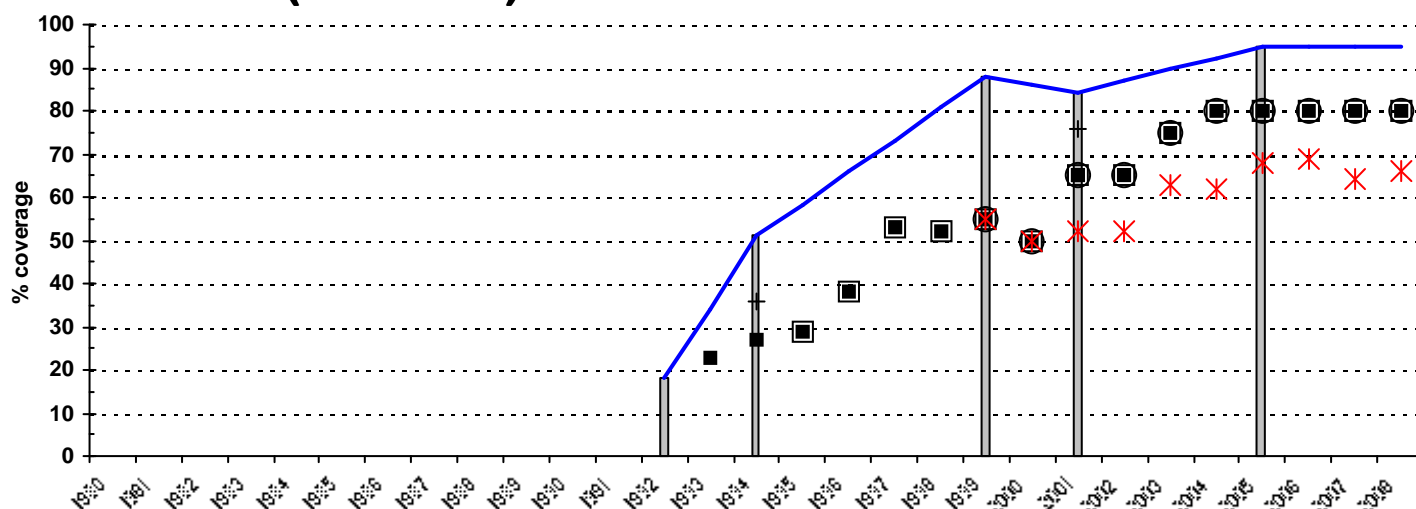
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\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Eritrea

## MCV (1980-2008)



### Description of trend

Estimates are based on survey data.

### Data presented in chart

| Year | WHO/<br>UNICEF<br>estimate<br>(%) | Reported to:* |               | Government<br>official<br>estimate<br>(%) | Reported doses<br>administered<br>(%)** | Survey data (%)***        |                         |
|------|-----------------------------------|---------------|---------------|---|---|---------------------------|-------------------------|
|      |                                   | WHO<br>(%)    | UNICEF<br>(%) |   |   | Survey<br>12-23<br>months | Survey<br><12<br>months |
| 1980 |                                   |               |               |   |   |                           |                         |
| 1981 |                                   |               |               |   |   |                           |                         |
| 1982 |                                   |               |               |   |   |                           |                         |
| 1983 |                                   |               |               |   |   |                           |                         |
| 1984 |                                   |               |               |   |   |                           |                         |
| 1985 |                                   |               |               |   |   |                           |                         |
| 1986 |                                   |               |               |   |   |                           |                         |
| 1987 |                                   |               |               |   |   |                           |                         |
| 1988 |                                   |               |               |   |   |                           |                         |
| 1989 |                                   |               |               |   |   |                           |                         |
| 1990 |                                   |               |               |   |   |                           |                         |
| 1991 |                                   |               |               |   |   |                           |                         |
| 1992 | 18                                |               |               |   |   | 18                        |                         |
| 1993 | 34                                |               | 23            |   |   |                           |                         |
| 1994 | 51                                |               | 27            |   |   | 51                        | 36                      |
| 1995 | 58                                | 29            | 29            |   |   |                           |                         |
| 1996 | 66                                | 38            | 38            |   |   |                           |                         |
| 1997 | 73                                | 53            | 53            |   |   |                           |                         |
| 1998 | 81                                | 52            | 52            |   |   |                           |                         |
| 1999 | 88                                | 55            | 55            | 55  | 55                                      | 88                        |                         |
| 2000 | 86                                | 50            | 50            | 50  | 50                                      |                           |                         |
| 2001 | 84                                | 65            | 65            | 65  | 52                                      | 84                        | 76                      |
| 2002 | 87                                | 65            | 65            | 65  | 52                                      |                           |                         |
| 2003 | 90                                | 75            | 75            | 75  | 63                                      |                           |                         |
| 2004 | 92                                | 80            | 80            | 80  | 62                                      |                           |                         |
| 2005 | 95                                | 80            | 80            | 80  | 68                                      | 95                        |                         |
| 2006 | 95                                | 80            | 80            | 80  | 69                                      |                           |                         |
| 2007 | 95                                | 80            | 80            | 80  | 64                                      |                           |                         |
| 2008 | 95                                | 80            | 80            | 80  | 66                                      |                           |                         |

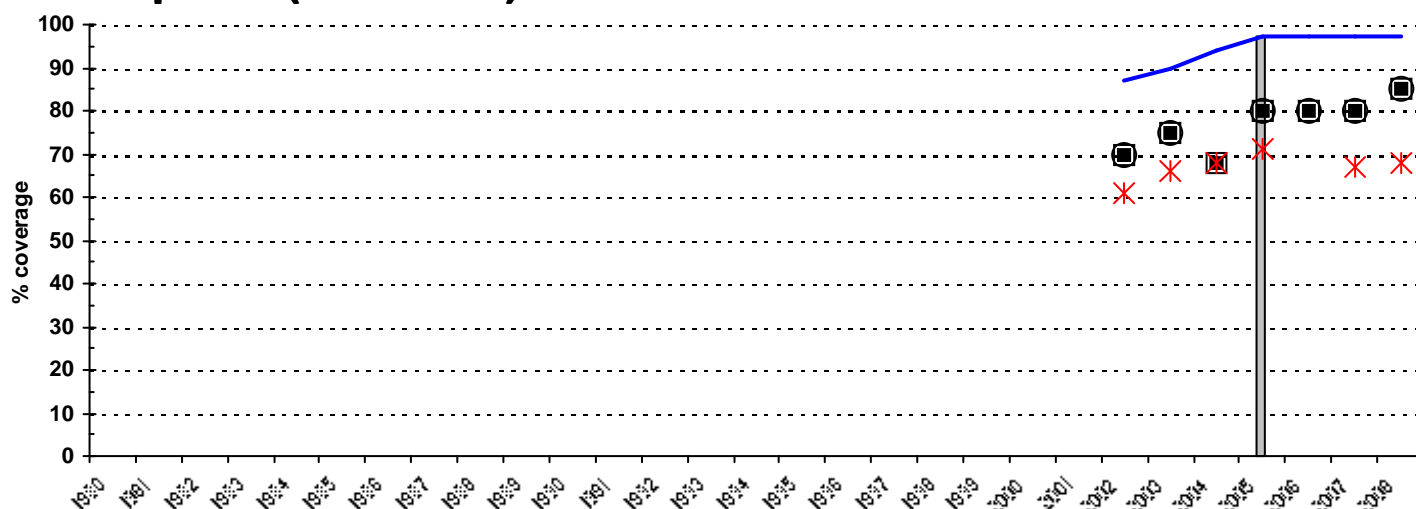
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\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Eritrea

## HepB3 (1980-2008)



### Description of trend

HepB vaccination introduced in 2002 with change to DPT-HepB quadravalent vaccine. Coverage is based on DPT3 estimates derived from survey data.

### Data presented in chart

| Year | WHO/<br>UNICEF<br>estimate<br>(%) | Reported to:*   |                    | Government<br>official<br>estimate<br>(%) | Reported<br>doses<br>administered<br>(%)** | Survey data (%)***             |                              |
|------|-----------------------------------|-----------------|--------------------|---|--|--------------------------------|------------------------------|
|      |                                   | WHO<br>(%)<br>□ | UNICEF<br>(%)<br>■ |   |  | Survey<br>12-23<br>months<br>▮ | Survey<br><12<br>months<br>+ |
| 1980 |                                   |                 |                    |   |  |                                |                              |
| 1981 |                                   |                 |                    |   |  |                                |                              |
| 1982 |                                   |                 |                    |   |  |                                |                              |
| 1983 |                                   |                 |                    |   |  |                                |                              |
| 1984 |                                   |                 |                    |   |  |                                |                              |
| 1985 |                                   |                 |                    |   |  |                                |                              |
| 1986 |                                   |                 |                    |   |  |                                |                              |
| 1987 |                                   |                 |                    |   |  |                                |                              |
| 1988 |                                   |                 |                    |   |  |                                |                              |
| 1989 |                                   |                 |                    |   |  |                                |                              |
| 1990 |                                   |                 |                    |   |  |                                |                              |
| 1991 |                                   |                 |                    |   |  |                                |                              |
| 1992 |                                   |                 |                    |   |  |                                |                              |
| 1993 |                                   |                 |                    |   |  |                                |                              |
| 1994 |                                   |                 |                    |   |  |                                |                              |
| 1995 |                                   |                 |                    |   |  |                                |                              |
| 1996 |                                   |                 |                    |   |  |                                |                              |
| 1997 |                                   |                 |                    |   |  |                                |                              |
| 1998 |                                   |                 |                    |   |  |                                |                              |
| 1999 |                                   |                 |                    |   |  |                                |                              |
| 2000 |                                   |                 |                    |   |  |                                |                              |
| 2001 |                                   |                 |                    |   |  |                                |                              |
| 2002 | 87                                | 70              | 70                 | 70  | 61   |                                |                              |
| 2003 | 90                                | 75              | 75                 | 75  | 66   |                                |                              |
| 2004 | 94                                | 68              | 68                 | 80  | 68   |                                |                              |
| 2005 | 97                                | 80              | 80                 | 80  | 71   | 97                             |                              |
| 2006 | 97                                | 80              | 80                 | 80  | 80   |                                |                              |
| 2007 | 97                                | 80              | 80                 | 80  | 67   |                                |                              |
| 2008 | 97                                | 85              | 85                 | 85  | 68   |                                |                              |

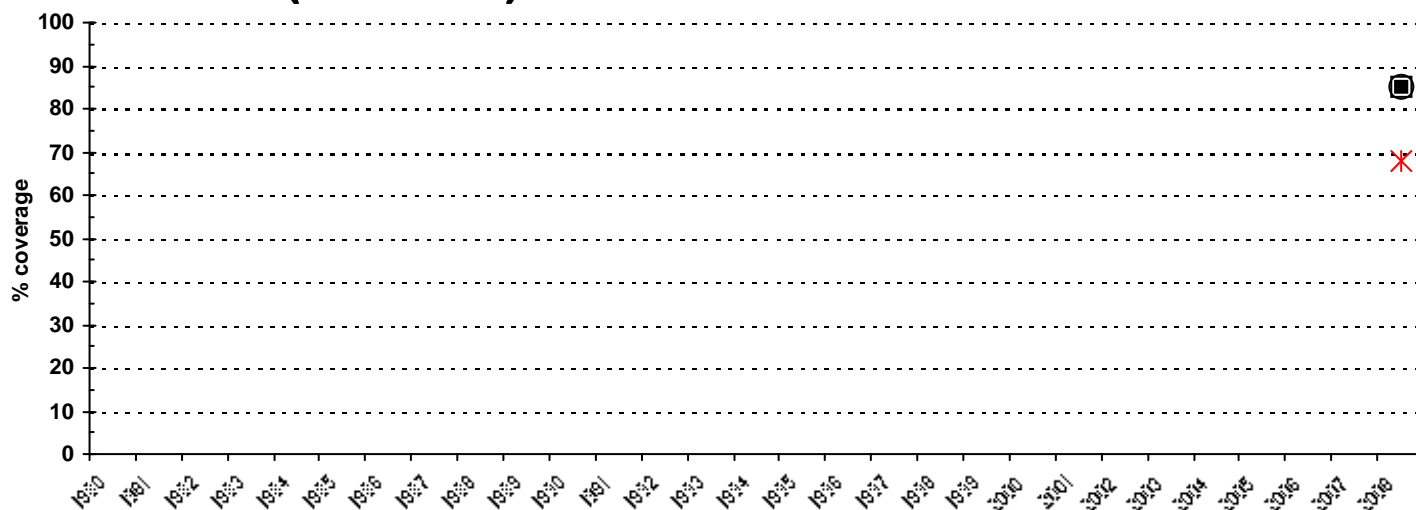
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# Eritrea

## Hib3 (1980-2008)



### Description of trend

Combination DTP-HepB-Hib vaccine introduced in 2003.

### Data presented in chart

| Year | WHO/<br>UNICEF<br>estimate<br>(%)<br><br>— | Reported to:*       |                        | Government<br>official<br>estimate<br>(%)<br><br>○ | Reported<br>doses<br>administered<br>(%)**<br><br>✕ | Survey data (%)***                |                                  |
|------|--|---------------------|------------------------|--|---|-----------------------------------|----------------------------------|
|      |  | WHO<br>(%)<br><br>□ | UNICEF<br>(%)<br><br>■ |  |   | Survey<br>12-23<br>months<br><br> | Survey<br><12<br>months<br><br>+ |
| 1980 |  |                     |                        |  |   |                                   |                                  |
| 1981 |  |                     |                        |  |   |                                   |                                  |
| 1982 |  |                     |                        |  |   |                                   |                                  |
| 1983 |  |                     |                        |  |   |                                   |                                  |
| 1984 |  |                     |                        |  |   |                                   |                                  |
| 1985 |  |                     |                        |  |   |                                   |                                  |
| 1986 |  |                     |                        |  |   |                                   |                                  |
| 1987 |  |                     |                        |  |   |                                   |                                  |
| 1988 |  |                     |                        |  |   |                                   |                                  |
| 1989 |  |                     |                        |  |   |                                   |                                  |
| 1990 |  |                     |                        |  |   |                                   |                                  |
| 1991 |  |                     |                        |  |   |                                   |                                  |
| 1992 |  |                     |                        |  |   |                                   |                                  |
| 1993 |  |                     |                        |  |   |                                   |                                  |
| 1994 |  |                     |                        |  |   |                                   |                                  |
| 1995 |  |                     |                        |  |   |                                   |                                  |
| 1996 |  |                     |                        |  |   |                                   |                                  |
| 1997 |  |                     |                        |  |   |                                   |                                  |
| 1998 |  |                     |                        |  |   |                                   |                                  |
| 1999 |  |                     |                        |  |   |                                   |                                  |
| 2000 |  |                     |                        |  |   |                                   |                                  |
| 2001 |  |                     |                        |  |   |                                   |                                  |
| 2002 |  |                     |                        |  |   |                                   |                                  |
| 2003 |  |                     |                        |  |   |                                   |                                  |
| 2004 |  |                     |                        |  |   |                                   |                                  |
| 2005 |  |                     |                        |  |   |                                   |                                  |
| 2006 |  |                     |                        |  |   |                                   |                                  |
| 2007 |  |                     |                        |  |   |                                   |                                  |
| 2008 | 97   | 85                  | 85                     | 85   | 68  |                                   |                                  |

\*Prior to 1998 national reports to WHO/UNICEF did not specify whether information was derived from administrative records, surveys or other sources.

\*\*Coverage based on registration of doses administered by health care providers.

\*\*\*In case more than one survey was implemented in a certain year the highest value is presented. Details of all data are presented in the second section of this report.

# Eritrea

## Details Survey Data

### Year Source

| Antigen   | Confirmation method | % coverage | Compliance with schedule | Age group | Sample size | % cards seen | Survey year | Comments |
|---|---------------------|------------|--------------------------|-----------|-------------|--------------|-------------|----------|
| <b>2005 Eritrea Routine Immunization Coverage Survey 2006</b>                         |                     |            |                          |           |             |              |             |          |
| BCG   | Card or History     | 98.9       |                          | 12-23 m   | 630         | 88.3         | 2006        | Crude    |
| DTP1  | Card or History     | 99.2       |                          | 12-23 m   | 630         | 88.3         | 2006        | Crude    |
| DTP3  | Card or History     | 96.8       |                          | 12-23 m   | 630         | 88.3         | 2006        | Crude    |
| Pol3  | Card or History     | 96.5       |                          | 12-23 m   | 630         | 88.3         | 2006        | Crude    |
| MCV   | Card or History     | 94.9       |                          | 12-23 m   | 630         | 88.3         | 2006        | Crude    |
| HepB  | Card or History     | 96.8       |                          | 12-23 m   | 630         | 88.3         | 2006        | Crude    |
| <b>2001 Eritrea Demographic and Health Survey 2002</b>                                |                     |            |                          |           |             |              |             |          |
| BCG   | Card or History     | 91.4       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| BCG   | C or H <12 month    | 89.3       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| DTP1  | Card or History     | 90.6       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| DTP1  | C or H <12 month    | 88.2       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| DTP3  | Card or History     | 82.8       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| DTP3  | C or H <12 month    | 79.1       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| Pol3  | Card or History     | 83.3       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| Pol3  | C or H <12 month    | 79.3       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| MCV   | Card or History     | 84.2       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| MCV   | C or H <12 month    | 75.5       |                          | 12-23 m   | 959         | 50.3         | 2002        |          |
| <b>1999 Eritrea EPI Coverage Survey Report 2000</b>                                   |                     |            |                          |           |             |              |             |          |
| BCG   | Card or History     | 98.1       | Crude                    | 12-23 m   | 647         | 91.7         | 2000        |          |
| DTP1  | Card or History     | 97.4       | Crude                    | 12-23 m   | 647         | 91.7         | 2000        |          |
| DTP3  | Card or History     | 92.8       | Crude                    | 12-23 m   | 647         | 91.7         | 2000        |          |
| Pol3  | Card or History     | 92.8       | Crude                    | 12-23 m   | 647         | 91.7         | 2000        |          |
| MCV   | Card or History     | 88.2       | Crude                    | 12-23 m   | 647         | 91.7         | 2000        |          |
| <b>1994 Eritrea, Demographic and Health Survey 1995, 1997</b>                         |                     |            |                          |           |             |              |             |          |
| BCG   | Card or History     | 60.7       |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| BCG   | C or H <12 month    | 54.3       |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| BCG   | C or H <12 month    | 41.6       |                          | 24-35 m   | 821         | 40.5         | 1995        |          |
| DTP1  | Card or History     | 60.9       |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| DTP1  | C or H <12 month    | 54.8       |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| DTP1  | C or H <12 month    | 42         |                          | 24-35 m   | 821         | 40.5         | 1995        |          |
| DTP3  | Card or History     | 48.8       |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| DTP3  | C or H <12 month    | 42         |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| DTP3  | C or H <12 month    | 29.8       |                          | 24-35 m   | 821         | 40.5         | 1995        |          |
| Pol3  | Card or History     | 47.7       |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| Pol3  | C or H <12 month    | 41.2       |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| Pol3  | C or H <12 month    | 27.9       |                          | 24-35 m   | 821         | 40.5         | 1995        |          |
| MCV   | Card or History     | 51         |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| MCV   | C or H <12 month    | 35.5       |                          | 12-23 m   | 725         | 50.3         | 1995        |          |
| MCV   | C or H <12 month    | 23         |                          | 24-35 m   | 821         | 40.5         | 1995        |          |
| <b>1992 Health and Nutrition Survey 1993, in: Children and Women in Eritrea, 1994</b> |                     |            |                          |           |             |              |             |          |
| BCG   | Card or History     | 19         |                          | 12-23 m   |             |              | 1993        |          |
| DTP1  | Card or History     |            |                          | 12-23 m   |             |              | 1993        |          |
| DTP3  | Card or History     | 14         |                          | 12-23 m   |             |              | 1993        |          |
| Pol3  | Card or History     | 14         |                          | 12-23 m   |             |              | 1993        |          |
| MCV   | Card or History     | 18         |                          | 12-23 m   |             |              | 1993        |          |

## Eritrea

### 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.

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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.

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| <b>Year</b> | <b>PAB coverage estimate (%)</b> |
|-------------|----------------------------------|
| 1980        |                                  |
| 1981        |                                  |
| 1982        |                                  |
| 1983        |                                  |
| 1984        |                                  |
| 1985        |                                  |
| 1986        |                                  |
| 1987        |                                  |
| 1988        |                                  |
| 1989        |                                  |
| 1990        |                                  |
| 1991        |                                  |
| 1992        |                                  |
| 1993        | 5                                |
| 1994        | 20                               |
| 1995        | 17                               |
| 1996        | 27                               |
| 1997        | 36                               |
| 1998        | 41                               |
| 1999        | 77                               |
| 2000        | 80                               |
| 2001        | 82                               |
| 2002        | 83                               |
| 2003        | 83                               |
| 2004        | 84                               |
| 2005        | 84                               |
| 2006        | 85                               |
| 2007        | 85                               |
| 2008        | 86                               |