



**Non-Polio AFP Rates  
2007 (annualized)**

# Myanmar Polio Newsletter

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**Percentage of Adequate stool  
collection 2007**

**Table 1: Reported AFP cases against targets by State/Division and classification status of cases with onset in 2006 and 2007 (date as of 15/10/2007)**

| State & Division | Population <15 years      | Minimum non-polio AFP target | 2007 (Onset)          |            |           |           |          |           |                           |                 |                       | 2006                |          |          |          |          |         |  |
|------------------|---------------------------|------------------------------|-----------------------|------------|-----------|-----------|----------|-----------|---------------------------|-----------------|-----------------------|---------------------|----------|----------|----------|----------|---------|--|
|                  |                           |                              | Case Classification   |            |           |           |          |           |                           |                 |                       | Case Classification |          |          |          |          |         |  |
|                  |                           |                              | AFP                   |            | Polio     |           |          | Pending   |                           |                 |                       | AFP                 |          | Polio    |          |          | Pending |  |
| AFP Cases        | Discarded (Non-polio AFP) | Confirmed Polio              | Wild Poliovirus Cases | Compatible | VDPV      | Total     | >90 Days | AFP Cases | Discarded (Non-polio AFP) | Confirmed Polio | Wild Poliovirus Cases | Compatible          | VDPV     | Total    | >90 Days |          |         |  |
| Ayeyarwady       | 2708341                   | 54                           | 26                    | 24         | 0         | 0         | 0        | 0         | 2                         | 0               | 53                    | 53                  | 0        | 0        | 0        | 0        |         |  |
| Bago East        | 1124456                   | 22                           | 15                    | 12         | 1         | 0         | 0        | 0         | 1                         | 1               | 21                    | 21                  | 0        | 0        | 0        | 0        |         |  |
| Bago West        | 913784                    | 18                           | 11                    | 11         | 0         | 0         | 0        | 0         | 0                         | 0               | 17                    | 17                  | 0        | 0        | 0        | 0        |         |  |
| Chin             | 192212                    | 4                            | 2                     | 2          | 0         | 0         | 0        | 0         | 0                         | 0               | 5                     | 5                   | 0        | 0        | 0        | 0        |         |  |
| Kachin           | 515712                    | 10                           | 6                     | 4          | 0         | 0         | 0        | 0         | 2                         | 2               | 6                     | 6                   | 0        | 0        | 0        | 0        |         |  |
| Kayah            | 105294                    | 2                            | 2                     | 2          | 0         | 0         | 0        | 0         | 0                         | 0               | 3                     | 3                   | 0        | 0        | 0        | 0        |         |  |
| Kayin            | 602029                    | 12                           | 7                     | 6          | 1         | 0         | 0        | 1         | 0                         | 0               | 13                    | 13                  | 0        | 0        | 0        | 0        |         |  |
| Magway           | 1814904                   | 36                           | 19                    | 15         | 0         | 0         | 0        | 0         | 4                         | 0               | 26                    | 26                  | 0        | 0        | 0        | 0        |         |  |
| Mandalay         | 2705689                   | 54                           | 25                    | 23         | 0         | 0         | 0        | 0         | 2                         | 0               | 49                    | 48                  | 0        | 0        | 1        | 0        |         |  |
| Mon              | 993998                    | 20                           | 27                    | 26         | 0         | 0         | 0        | 0         | 1                         | 0               | 23                    | 23                  | 0        | 0        | 0        | 0        |         |  |
| Rakhine          | 1096283                   | 22                           | 35                    | 14         | 11        | 11        | 8        | 0         | 2                         | 0               | 28                    | 28                  | 0        | 0        | 0        | 0        |         |  |
| Sagaing          | 2108204                   | 42                           | 26                    | 21         | 0         | 0         | 0        | 0         | 5                         | 0               | 47                    | 47                  | 0        | 0        | 0        | 0        |         |  |
| Shan East        | 304651                    | 6                            | 6                     | 6          | 0         | 0         | 0        | 0         | 0                         | 0               | 8                     | 8                   | 0        | 0        | 0        | 0        |         |  |
| Shan North       | 879540                    | 18                           | 14                    | 13         | 0         | 0         | 0        | 0         | 1                         | 0               | 22                    | 22                  | 0        | 0        | 0        | 0        |         |  |
| Shan South       | 751650                    | 15                           | 9                     | 8          | 0         | 0         | 0        | 0         | 1                         | 0               | 14                    | 14                  | 0        | 0        | 0        | 0        |         |  |
| Tanintharyi      | 539460                    | 11                           | 5                     | 5          | 0         | 0         | 0        | 0         | 0                         | 0               | 13                    | 13                  | 0        | 0        | 0        | 0        |         |  |
| Yangon           | 2285257                   | 46                           | 38                    | 33         | 1         | 0         | 0        | 1         | 3                         | 0               | 62                    | 62                  | 0        | 0        | 0        | 0        |         |  |
| <b>TOTAL</b>     | <b>19641463</b>           | <b>393</b>                   | <b>273</b>            | <b>225</b> | <b>14</b> | <b>11</b> | <b>8</b> | <b>3</b>  | <b>24</b>                 | <b>2</b>        | <b>410</b>            | <b>409</b>          | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> |         |  |

**Table 2: Selected Performance Indicators by State/Division for cases with onset in 2006 and 2007 (data as of 15/10/2007)**

| State & Division | 2007 (onset)            |                    |                                 |                     |                                   |                                    |                                |  | 2006                    |                    |                                 |                     |                                   |                                    |                                |  |
|------------------|-------------------------|--------------------|---------------------------------|---------------------|-----------------------------------|------------------------------------|--------------------------------|--|-------------------------|--------------------|---------------------------------|---------------------|-----------------------------------|------------------------------------|--------------------------------|--|
|                  | Surveillance Indicators |                    |                                 |                     | Surveillance Indicators           |                                    |                                |  | Surveillance Indicators |                    |                                 |                     | Surveillance Indicators           |                                    |                                |  |
|                  | AFP Rates               |                    | Specimen                        |                     | AFP Rates                         |                                    | Specimen                       |  | AFP Rates               |                    | Specimen                        |                     | AFP Rates                         |                                    | Specimen                       |  |
|                  | AFP rate                | Non-polio AFP rate | % within 2 spec. within 14 days | % with any specimen | % AFP investigated within 48 hrs. | % AFP cases with 60 days Follow-up | % Weekly zero reports received | % Weekly zero reports received on Time | AFP rate                | Non-polio AFP rate | % within 2 spec. within 14 days | % with any specimen | % AFP investigated within 48 hrs. | % AFP cases with 60 days Follow-up | % Weekly zero reports received | % Weekly zero reports received on Time |
| <b>TARGET</b>    | <b>2</b>                | <b>80</b>          | <b>100</b>                      | <b>100</b>          | <b>80</b>                         | <b>80</b>                          | <b>80</b>                      | <b>80</b>                              | <b>2</b>                | <b>80</b>          | <b>100</b>                      | <b>100</b>          | <b>80</b>                         | <b>80</b>                          | <b>80</b>                      | <b>80</b>                              |
| Ayeyarwady       | 1.28                    | 1.18               | 100                             | 100                 | 100                               | 74                                 | 97                             | 94                                     | 2.00                    | 1.96               | 92                              | 100                 | 94                                | 92                                 | 100                            | 96                                     |
| Bago East        | 1.78                    | 1.42               | 93                              | 100                 | 93                                | 78                                 | 90                             | 90                                     | 1.91                    | 1.91               | 100                             | 100                 | 100                               | 88                                 | 100                            | 95                                     |
| Bago West        | 1.61                    | 1.61               | 100                             | 100                 | 91                                | 60                                 | 87                             | 85                                     | 1.90                    | 1.90               | 88                              | 100                 | 100                               | 87                                 | 100                            | 97                                     |
| Chin             | 1.39                    | 1.39               | 100                             | 100                 | 100                               | 100                                | 82                             | 68                                     | 2.65                    | 2.65               | 100                             | 100                 | 100                               | 100                                | 100                            | 83                                     |
| Kachin           | 1.55                    | 1.03               | 67                              | 100                 | 100                               | 83                                 | 85                             | 71                                     | 1.19                    | 0.99               | 100                             | 100                 | 100                               | 100                                | 100                            | 85                                     |
| Kayah            | 2.53                    | 2.53               | 100                             | 100                 | 100                               | 100                                | 90                             | 79                                     | 2.91                    | 2.91               | 100                             | 100                 | 100                               | 100                                | 100                            | 90                                     |
| Kayin            | 1.55                    | 1.33               | 86                              | 100                 | 100                               | 50                                 | 90                             | 90                                     | 2.03                    | 1.86               | 83                              | 100                 | 100                               | 91                                 | 100                            | 100                                    |
| Magway           | 1.40                    | 1.10               | 100                             | 100                 | 100                               | 100                                | 72                             | 72                                     | 1.46                    | 1.41               | 96                              | 100                 | 100                               | 89                                 | 100                            | 100                                    |
| Mandalay         | 1.23                    | 1.13               | 96                              | 100                 | 100                               | 67                                 | 100                            | 100                                    | 1.85                    | 1.70               | 96                              | 100                 | 98                                | 88                                 | 100                            | 97                                     |
| Mon              | 3.62                    | 3.49               | 96                              | 100                 | 100                               | 84                                 | 95                             | 95                                     | 2.36                    | 2.36               | 100                             | 100                 | 91                                | 87                                 | 100                            | 98                                     |
| Rakhine          | 4.26                    | 1.70               | 66                              | 100                 | 89                                | 84                                 | 95                             | 79                                     | 2.61                    | 2.33               | 89                              | 100                 | 96                                | 81                                 | 100                            | 75                                     |
| Sagaing          | 1.64                    | 1.33               | 100                             | 100                 | 100                               | 63                                 | 92                             | 89                                     | 2.27                    | 2.18               | 100                             | 100                 | 98                                | 68                                 | 100                            | 83                                     |
| Shan East        | 2.63                    | 2.63               | 100                             | 100                 | 100                               | 67                                 | 81                             | 81                                     | 2.68                    | 2.68               | 100                             | 100                 | 100                               | 88                                 | 100                            | 98                                     |
| Shan North       | 2.12                    | 1.97               | 100                             | 100                 | 100                               | 64                                 | 83                             | 77                                     | 2.55                    | 2.32               | 100                             | 100                 | 100                               | 100                                | 100                            | 100                                    |
| Shan South       | 1.60                    | 1.42               | 100                             | 100                 | 100                               | 50                                 | 96                             | 95                                     | 1.90                    | 1.90               | 100                             | 100                 | 100                               | 71                                 | 100                            | 87                                     |
| Tanintharyi      | 1.24                    | 1.24               | 100                             | 100                 | 100                               | 100                                | 92                             | 78                                     | 2.46                    | 2.46               | 100                             | 100                 | 100                               | 100                                | 100                            | 79                                     |
| Yangon           | 2.22                    | 1.93               | 95                              | 100                 | 100                               | 72                                 | 95                             | 93                                     | 2.77                    | 2.72               | 90                              | 100                 | 94                                | 92                                 | 100                            | 100                                    |
| <b>TOTAL</b>     | <b>1.85</b>             | <b>1.53</b>        | <b>93</b>                       | <b>100</b>          | <b>98</b>                         | <b>74</b>                          | <b>91</b>                      | <b>86</b>                              | <b>2.12</b>             | <b>2.04</b>        | <b>95</b>                       | <b>100</b>          | <b>97</b>                         | <b>88</b>                          | <b>100</b>                     | <b>93</b>                              |

**Table 3: AFP cases by month of paralysis onset, last 13 months**

| State/Division | 2005 Total AFP | 2006 Total AFP | 2007 AFP to date | Sep-06    | Oct-06    | Nov-06    | Dec-06    | Jan-07    | Feb-07    | Mar-07    | Apr-07    | May-07    | Jun-07    | Jul-07    | Aug-07    | Sep-07    |
|----------------|----------------|----------------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ayeyarwady     | 34             | 52             | 26               | 4         | 14        | 1         | 5         | 3         | 3         | 3         | 0         | 1         | 4         | 5         | 5         | 2         |
| Bago East      | 14             | 21             | 14               | 0         | 1         | 3         | 1         | 1         | 1         | 1         | 0         | 0         | 2         | 4         | 4         | 1         |
| Bago West      | 28             | 17             | 11               | 1         | 0         | 2         | 0         | 1         | 1         | 0         | 0         | 0         | 1         | 3         | 4         | 1         |
| Chin           | 2              | 5              | 2                | 0         | 0         | 0         | 1         | 0         | 1         | 0         | 0         | 0         | 0         | 0         | 1         | 0         |
| Kachin         | 8              | 6              | 6                | 0         | 1         | 0         | 1         | 0         | 0         | 0         | 0         | 2         | 2         | 2         | 0         | 0         |
| Kayah          | 3              | 4              | 2                | 0         | 0         | 0         | 1         | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1         |
| Kayin          | 11             | 12             | 7                | 1         | 2         | 1         | 0         | 0         | 0         | 0         | 1         | 0         | 2         | 3         | 1         | 0         |
| Magway         | 35             | 26             | 19               | 0         | 3         | 6         | 2         | 1         | 0         | 1         | 1         | 2         | 3         | 5         | 0         | 6         |
| Mandalay       | 42             | 49             | 25               | 3         | 8         | 6         | 10        | 2         | 3         | 2         | 2         | 1         | 2         | 3         | 7         | 3         |
| Mon            | 13             | 23             | 27               | 1         | 3         | 5         | 4         | 2         | 2         | 0         | 0         | 2         | 7         | 12        | 1         | 1         |
| Rakhine        | 21             | 28             | 35               | 1         | 5         | 3         | 4         | 4         | 2         | 9         | 6         | 4         | 3         | 4         | 1         | 2         |
| Sagaing        | 43             | 47             | 26               | 3         | 8         | 6         | 10        | 1         | 2         | 2         | 1         | 3         | 3         | 7         | 2         | 5         |
| Shan East      | 3              | 8              | 6                | 1         | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 2         | 3         | 0         | 0         |
| Shan North     | 10             | 22             | 14               | 4         | 6         | 1         | 4         | 3         | 0         | 1         | 2         | 1         | 2         | 2         | 2         | 1         |
| Shan South     | 8              | 14             | 9                | 1         | 3         | 6         | 1         | 1         | 2         | 0         | 0         | 0         | 2         | 3         | 0         | 1         |
| Tanintharyi    | 8              | 13             | 5                | 1         | 1         | 3         | 3         | 0         | 0         | 0         | 0         | 0         | 1         | 2         | 1         | 1         |
| Yangon         | 57             | 63             | 39               | 8         | 6         | 5         | 0         | 4         | 1         | 0         | 3         | 0         | 6         | 16        | 5         | 4         |
| <b>Total</b>   | <b>340</b>     | <b>410</b>     | <b>273</b>       | <b>29</b> | <b>62</b> | <b>48</b> | <b>47</b> | <b>24</b> | <b>18</b> | <b>19</b> | <b>16</b> | <b>17</b> | <b>42</b> | <b>74</b> | <b>34</b> | <b>29</b> |

**Table 4: Stool processing and Laboratory performance indicators for cases with onset in 2006 & 2007, data as of 15/10/2007**

|  | Target | Achievement |      |
|--|--------|-------------|------|
|  |        | 2006        | 2007 |
| % Specimens arriving at the Lab within 3 days after being sent                 | 80     | 97          | 97   |
| % Specimens arriving in the Lab in good condition                              | 90     | 100         | 100  |
| % Specimens with a turn-around time of 28 days or less                         | 80     | 100         | 100  |
| % Specimens for which non-polio enterovirus was isolated                       | 10     | 15          | 13   |
| % Polio-positive specimens forwarded to Ref Lab within 14 days after isolation | 80     | 100         | 100  |

**Table 5: Results of Intra-Typic Differentiation by NIH/Bangkok, 2007**

| State/Division | Township   | IDCODE       | Onset Date | Stool Condition | Stool 1              | Stool 2              |
|----------------|------------|--------------|------------|-----------------|----------------------|----------------------|
| KAYIN          | HPA-AN     | MMR030507002 | 11/06/2007 | Good            | OTHERS-VDPV          | OTHERS-VDPV          |
| SAGAING        | MYAUNG     | MMR052807001 | 03/09/2007 | Good            | P3(SL)               | P3(SL)               |
| SAGAING        | WUNTHO     | MMR053507001 | 02/02/2007 | Good            | P1(SL)               | P1(SL)               |
| BAGO(EAST)     | PYU        | MMR071607001 | 21/07/2007 | Good            | OTHERS-VDPV          | OTHERS-VDPV          |
| BAGO(EAST)     | THANATPIN  | MMR072407004 | 04/09/2007 | Good            | P1(SL)               | P1(SL)               |
| MANDALAY       | LEWAY      | MMR092507001 | 08/02/2007 | Good            | P1(SL)+P2(SL)+P3(SL) | P1(SL)+P2(SL)+P3(SL) |
| RAKHINE        | BUTHIDAUNG | MMR110807002 | 28/05/2007 | Good            | P1 WILD              | P1 WILD              |
| RAKHINE        | MAUNGDAW   | MMR111307003 | 26/03/2007 | Good            | P1 WILD              | P1 WILD              |
| RAKHINE        | MAUNGDAW   | MMR111307004 | 07/03/2007 | Good            | NPEV                 | P2(SL)+P3(SL)        |
| RAKHINE        | MAUNGDAW   | MMR111307005 | 19/04/2007 | Good            | P1 WILD              | P1 WILD              |
| RAKHINE        | MAUNGDAW   | MMR111307006 | 13/04/2007 | Good            | P1 WILD              | P1 WILD              |
| RAKHINE        | MAUNGDAW   | MMR111307007 | 19/03/2007 | Good            | P2(SL)               | P2(SL)               |
| RAKHINE        | MAUNGDAW   | MMR111307009 | 04/04/2007 | Good            | P2(SL)               | P2(SL)               |
| RAKHINE        | MAUNGDAW   | MMR111307014 | 10/04/2007 | Good            | P1 WILD              | P1 WILD              |
| RAKHINE        | MAUNGDAW   | MMR111307017 | 18/01/2007 | Good            | NPEV                 | P2(SL)               |
| RAKHINE        | MAUNGDAW   | MMR111307018 | 23/02/2007 | Good            | P2(SL)               | P2(SL)               |
| RAKHINE        | MAUNGDAW   | MMR111307019 | 03/05/2007 | Good            | P1 WILD              | P1 WILD              |
| RAKHINE        | MAUNGDAW   | MMR111307020 | 12/05/2007 | Good            | P1 WILD              | P1W+NPEV             |
| YANGON         | THAKETA    | MMR122607001 | 04/07/2007 | Good            | NEGATIVE             | P1(SL)               |
| YANGON         | KAYAN      | MMR123407001 | 30/04/2007 | Good            | OTHERS-VDPV          | OTHERS-VDPV          |
| YANGON         | TAIKKYI    | MMR123507002 | 28/08/2007 | Good            | P1(SL) + P3(SL)      | P1(SL) + P3(SL)      |
| SHAN(EAST)     | TA CHILEIK | MMR131307001 | 08/07/2007 | Good            | P2(SL)               | P2(SL)               |
| AYEYARWADY     | PANTANAW   | MMR141007002 | 14/06/2007 | Good            | P1(SL)               | P1(SL)               |

Note: P1, P2, P3 indicates Polio Serotype 1, 2, 3 respectively; "W" indicates "Wild Virus"; "S" indicates "Sabin (=Vaccine) Virus"

**Specimen tested at DHAKA and CDC**

| State/Division | Township | IDCODE       | Onset Date | Stool Condition | Stool 1 | Stool 2 |
|----------------|----------|--------------|------------|-----------------|---------|---------|
| RAKHINE        | MAUNGDAW | MMR111307008 | 16/03/2007 | Good            | P1 WILD | P1 WILD |



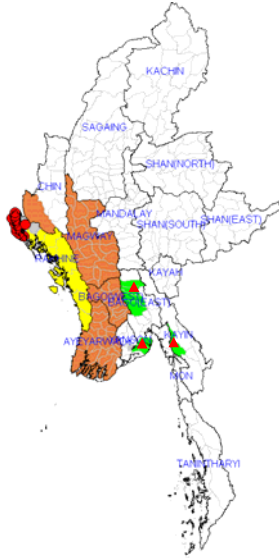
# Update on polio outbreak and response immunization and AFP Surveillance in Myanmar

## Polio Situation

Polio case count remained 14 since July 2007 in Myanmar. Last wild poliovirus case has been reported from Buthedaung

### Wild Polio, Compatible and SIA Rounds

Myanmar, 2007



township of Northern Rakhine with paralysis onset on 28 May 2007 and last Vaccine derived poliovirus case has been reported from Bago East Division with paralysis onset on 21 July 2007.

| STATE/DIVISION | TOWNSHIP   | Wild Polio | VDPV     | Compatible |
|----------------|------------|------------|----------|------------|
| RAKHINE        | MAUNGDAW   | 10         |          | 8          |
|                | BUTHIDAUNG | 1          |          |            |
| YANGON         | KAYAN      |            | 1        |            |
| KAYIN          | HPA-AN     |            | 1        |            |
| BAGO EAST      | PYU        |            | 1        |            |
| <b>Total</b>   |            | <b>11</b>  | <b>3</b> | <b>8</b>   |

- 5 Rounds (May, Jun, Jul, Sep, Nov - 2007)
- 4 Rounds (May, Jun, Jul, Sep, Nov - 2007)
- 3 Rounds (Jun, Jul, Nov - 2007)
- 2 Rounds (Sep and Oct 2007)
- 1 Round (Nov 2007 - NID)

## Summary report on response immunization

In response to polio outbreak, Ministry of Health, Union of Myanmar has conducted five rounds of OPV vaccination in Rakhine, four rounds in adjoining states and divisions Magway, Bago and Ayeyarwady, two rounds in vaccine derived poliovirus circulation areas and one round of National Immunization Day in entire country.

### Mop up achievements

| State/Division | No. of Township | 1st Round | 2nd Round | 3rd Round | 4th Round |
|----------------|-----------------|-----------|-----------|-----------|-----------|
| Rakhine        | 17              | 117       | 119       | 121       | 102       |
| Chin           | 1               | 99        | 101       | 100       |           |
| Ayeyarwady     | 26              |           | 96        | 97        |           |
| Bago (West)    | 14              |           | 99        | 99        |           |
| Magway         | 25              |           | 98        | 99        |           |
|                | 83              | 117       | 101       | 102       | 102       |

### Special immunization campaign in response to VDPV

| State/Division | No. of Township | Coverage |
|----------------|-----------------|----------|
| Bago (East)    | 6               | 97       |
| Kayin          | 1               | 95       |
| Mon            | 2               | 98       |
| Yangon         | 3               | 99       |
|                | 12              | 99       |

## AFP Surveillance

Acute Flaccid Paralysis surveillance has improved after May in country. Non polio AFP rate has reached 1.8 and Adequate specimen collection rate has reached 90% in Myanmar.

New batch of Regional Surveillance officers have joined from October 2007 at States and Divisions to support Integrated Vaccine Preventable Disease Surveillance and assist in planning and implementation of good quality of National Immunization campaigns.

Non-polio AFP Cases By Month of Onset Myanmar, 2003-2007

