

# MEASLES-RUBELLA

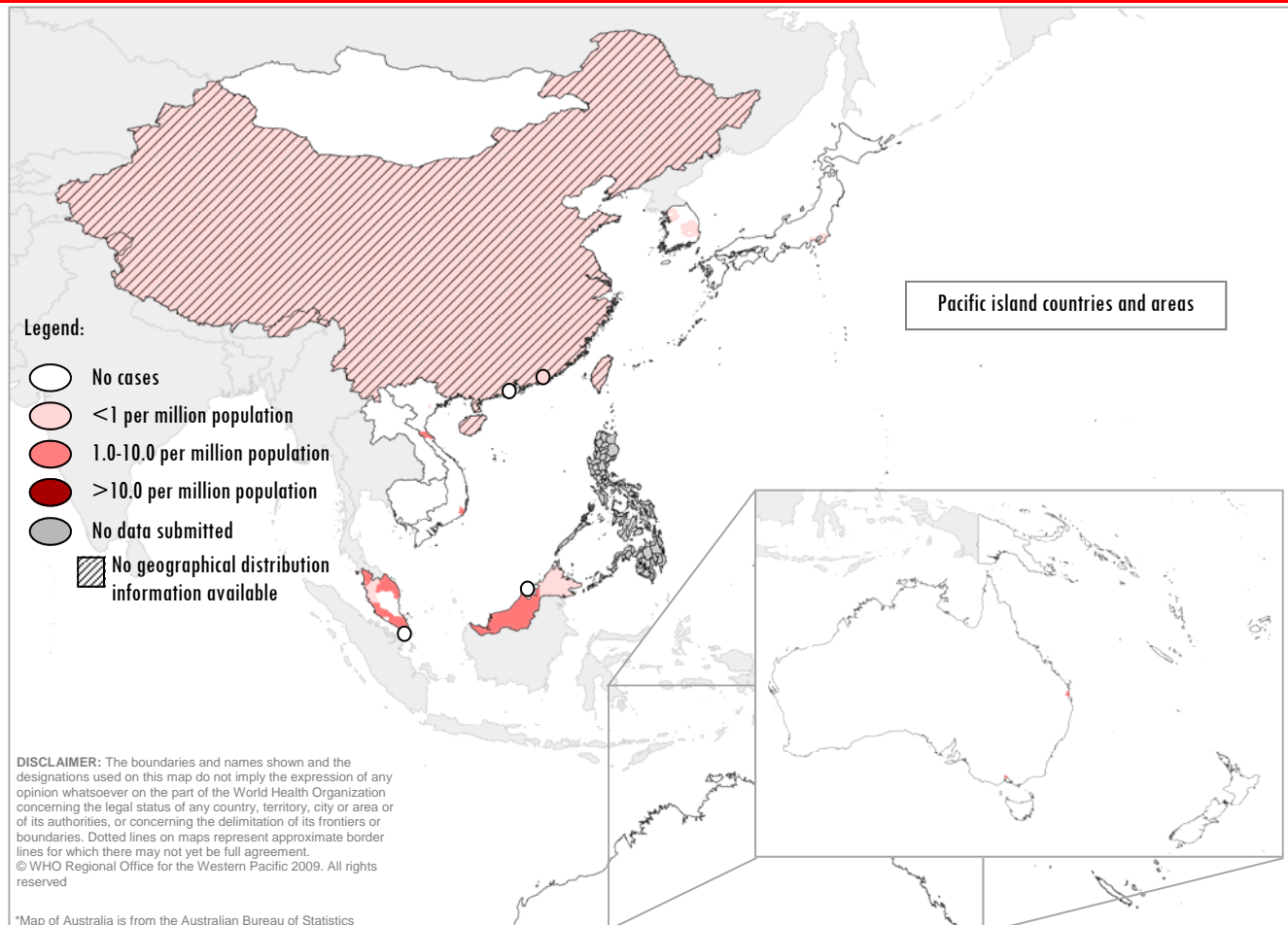
Bulletin

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Figure 1. Incidence rate of total (confirmed and compatible) measles cases with rash onset 1–30 June 2018, WHO Western Pacific Region



Source: Measles and rubella monthly country reports to the Western Pacific Regional Office by 20 July 2018

Table 1. Numbers of confirmed and total (confirmed and compatible) measles cases by month of rash onset, January 2017–June 2018, WHO Western Pacific Region

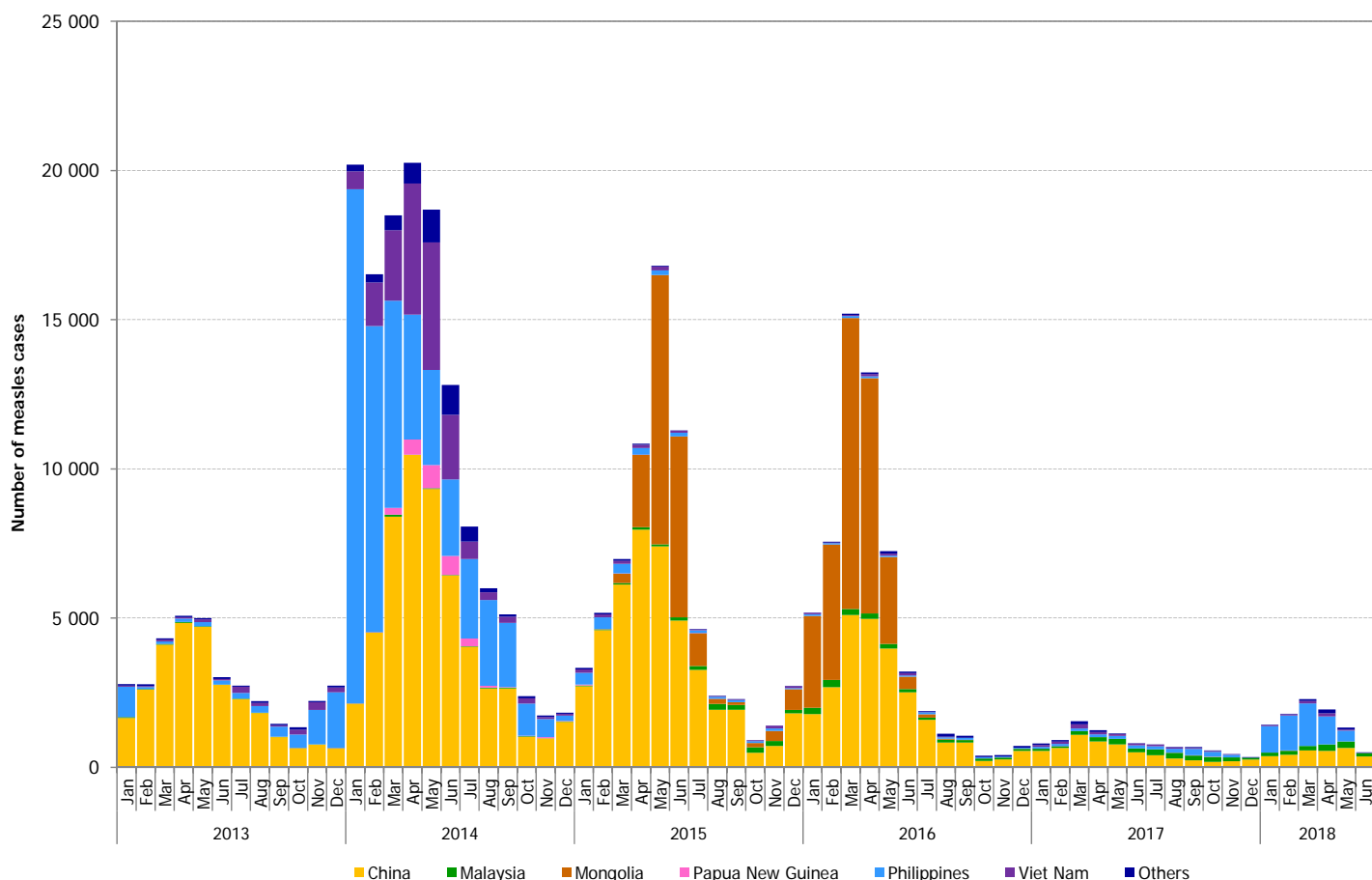
| Country/area                       | 2018             |                    |                  |                    |                  |                    |                  |                    |                  |                    |                  |                    |
|------------------------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|
|                                    | Jan              |                    | Feb              |                    | Mar              |                    | Apr              |                    | May              |                    | Jun              |                    |
|                                    | No. of confirmed | Total no. of cases | No. of confirmed | Total no. of cases | No. of confirmed | Total no. of cases | No. of confirmed | Total no. of cases | No. of confirmed | Total no. of cases | No. of confirmed | Total no. of cases |
| Australia <sup>1</sup>             | 3                | 3                  | 2                | 2                  | 30               | 30                 | 10               | 10                 | 4                | 4                  | 2                | 2                  |
| Brunei Darussalam                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  |
| Cambodia                           | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  |
| China                              | 363              | 372                | 407              | 418                | 550              | 559                | 537              | 549                | 633              | 649                | 317              | 363                |
| China, Hong Kong SAR               | 0                | 0                  | 0                | 0                  | 3                | 3                  | 4                | 4                  | 2                | 2                  | 1                | 1                  |
| China, Macao SAR                   | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 1                | 1                  | 0                | 0                  |
| Japan                              | 1                | 1                  | 7                | 7                  | 20               | 20                 | 86               | 92                 | 43               | 44                 | 10               | 10                 |
| Lao People's Democratic Republic   | 5                | 5                  | 0                | 0                  | 0                | 0                  | 1                | 1                  | 1                | 1                  | 0                | 0                  |
| Malaysia                           | 113              | 119                | 131              | 138                | 152              | 155                | 206              | 220                | 204              | 222                | 102              | 116                |
| Mongolia                           | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  |
| New Zealand                        | 1                | 1                  | 5                | 5                  | 4                | 4                  | 15               | 15                 | 1                | 1                  | 0                | 0                  |
| Papua New Guinea                   | 0                | 0                  | 3                | 3                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  |
| Philippines                        | 366              | 891                | 445              | 1179               | 506              | 1425               | 230              | 940                | 23               | 353                | Not available    | Not available      |
| Republic of Korea                  | 2                | 2                  | 0                | 0                  | 2                | 2                  | 0                | 1                  | 6                | 8                  | 1                | 2                  |
| Singapore                          | 4                | 4                  | 3                | 3                  | 6                | 6                  | 7                | 7                  | 5                | 5                  | 0                | 0                  |
| Viet Nam                           | 16               | 33                 | 22               | 35                 | 55               | 83                 | 38               | 94                 | 37               | 44                 | 3                | 7                  |
| Pacific island countries and areas | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  | 0                | 0                  |
| <b>Western Pacific Region</b>      | <b>874</b>       | <b>1431</b>        | <b>1025</b>      | <b>1790</b>        | <b>1328</b>      | <b>2287</b>        | <b>1134</b>      | <b>1933</b>        | <b>960</b>       | <b>1334</b>        | <b>436</b>       | <b>501</b>         |

-- No data

<sup>1</sup> Reports only confirmed cases

Source: Case based and aggregate data reports to the Western Pacific Regional Office by 20 July 2018

Figure 2. Total (confirmed and compatible) measles cases by month of rash onset, WHO Western Pacific Region, 2013–2018 as of 20 July 2018



Source: Measles and rubella monthly country reports to WHO by 20 July 2018

Table 2. Status of verification of measles elimination, WHO Western Pacific Region

| Country/area                       | Year verified | 2016                                      | 2017                   |                     |                |              |                        | % of cases with known source of infection | 2018                   |                     |                |              |                        |   |
|------------------------------------|---------------|---|------------------------|---------------------|----------------|--------------|------------------------|---|------------------------|---------------------|----------------|--------------|------------------------|---|
|                                    |               | % of cases with known source of infection | No. of confirmed cases | Source of infection |                |              |                        |   | No. of confirmed cases | Source of infection |                |              |                        | % of cases with known source of infection |
|                                    |               |   |                        | Imported            | Import-related | Endemic      | Unknown / not reported |   |                        | Imported            | Import-related | Endemic      | Unknown / not reported |   |
| Australia                          | 2014          | 49.5%                                     | 81                     | 38                  | 32             | 0            | 11                     | 86.4%                                     | 51                     | 27                  | 16             | 0            | 8                      | 84.3%                                     |
| Brunei Darussalam                  | 2015          | 100.0%                                    | 0                      | -                   | -              | -            | -                      | -   | 0                      | -                   | -              | -            | -                      | -   |
| Cambodia                           | 2015          | 0.0%                                      | 10                     | 0                   | 0              | 0            | 10                     | 0.0%                                      | 0                      | -                   | -              | -            | -                      | -   |
| China                              | -             | 0.0%                                      | 5 181                  | 0                   | 0              | 0            | 5 181                  | 0.0%                                      | 2 807                  | 0                   | 0              | 0            | 2 807                  | 0.0%                                      |
| China, Hong Kong SAR               | 2016          | 11.1%                                     | 4                      | 3                   | 0              | 0            | 1                      | 75.0%                                     | 10                     | 4                   | 0              | 0            | 6                      | 40.0%                                     |
| China, Macao SAR                   | 2014          | -   | 2                      | 0                   | 2              | 0            | 0                      | 100.0%                                    | 1                      | 1                   | 0              | 0            | 0                      | 100.0%                                    |
| Japan                              | 2015          | 81.6%                                     | 183                    | 34                  | 136            | 0            | 13                     | 92.9%                                     | 167                    | 18                  | 137            | 0            | 12                     | 92.8%                                     |
| Lao People's Democratic Republic   | -             | 0.0%                                      | 3                      | 0                   | 0              | 0            | 3                      | 0.0%                                      | 7                      | 0                   | 0              | 0            | 7                      | 0.0%                                      |
| Malaysia                           | -             | 95.6%                                     | 1 624                  | 5                   | 0              | 1 056        | 563                    | 65.3%                                     | 909                    | 3                   | 0              | 579          | 327                    | 64.0%                                     |
| Mongolia                           | -             | 100.0%                                    | 9                      | 0                   | 0              | 9            | 0                      | 100.0%                                    | 0                      | -                   | -              | -            | -                      | -   |
| New Zealand                        | 2017          | 0.0%                                      | 14                     | 0                   | 0              | 0            | 14                     | 0.0%                                      | 26                     | 0                   | 0              | 0            | 26                     | 0.0%                                      |
| Papua New Guinea                   | -             | -   | 7                      | 0                   | 0              | 0            | 7                      | 0.0%                                      | 6                      | 0                   | 0              | 0            | 6                      | 0.0%                                      |
| Philippines                        | -             | 28.4%                                     | 251                    | 0                   | 0              | 43           | 208                    | 17.1%                                     | 1 578                  | 41                  | 9              | 930          | 598                    | 62.1%                                     |
| Republic of Korea                  | 2014          | 100.0%                                    | 5                      | 3                   | 0              | 0            | 2                      | 60.0%                                     | 11                     | 3                   | 2              | 0            | 6                      | 45.5%                                     |
| Singapore                          | -             | 75.7%                                     | 68                     | 20                  | 22             | 0            | 26                     | 61.8%                                     | 25                     | 7                   | 0              | 0            | 18                     | 28.0%                                     |
| Viet Nam                           | -             | 0.0%                                      | 100                    | 0                   | 0              | 0            | 100                    | 0.0%                                      | 162                    | 0                   | 0              | 0            | 162                    | 0.0%                                      |
| Pacific island countries and areas | -             | 0.0%                                      | 1                      | 0                   | 0              | 0            | 1                      | 0.0%                                      | 0                      | -                   | -              | -            | -                      | -   |
| <b>Total</b>                       |               | <b>18.2%</b>                              | <b>7 543</b>           | <b>103</b>          | <b>192</b>     | <b>1 108</b> | <b>6 140</b>           | <b>18.6%</b>                              | <b>5 760</b>           | <b>104</b>          | <b>164</b>     | <b>1 509</b> | <b>3 983</b>           | <b>30.9%</b>                              |

Blue No measles cases  
 Green ≥80%  
 Yellow 60–79%  
 Red <60%

Source: Measles and rubella monthly country reports to WHO by 20 July 2018

Table 3. Measles case classification and incidence by country and area, WHO Western Pacific Region, 2014–2018 as of 20 July 2018

| Country/area                                    | 2014  |                                      | 2015  |                                      | 2016  |                                      | 2017  |                                      | 2018                                  |                         |                        |                              |  |              |            |                                |   |                       | Rash onset of last confirmed measles case |           |           |
|---|---|--------------------------------------|---|--------------------------------------|---|--------------------------------------|---|--------------------------------------|---------------------------------------|-------------------------|------------------------|------------------------------|--|--------------|------------|--------------------------------|---|-----------------------|---|-----------|-----------|
|   | Total confirmed and compatible <sup>1</sup> | Measles incidence per 1 million pop. | Total confirmed and compatible <sup>1</sup> | Measles incidence per 1 million pop. | Total confirmed and compatible <sup>1</sup> | Measles incidence per 1 million pop. | Total confirmed and compatible <sup>1</sup> | Measles incidence per 1 million pop. | Population (in millions) <sup>2</sup> | Suspected measles cases | Pending classification | Discarded cases <sup>3</sup> | Confirmed and compatible measles cases |              |            |                                |   | Deaths due to measles |   |           |           |
|   |   |                                      |   |                                      |   |                                      |   |                                      |                                       |                         |                        |                              | Compatible cases                       | Lab          | Epi-linked | Total confirmed and compatible | Annualized measles incidence per 1 million pop. |                       |   |           |           |
| Australia                                       | 340   | 14.5                                 | 74  | 3.1                                  | 99  | 4.1                                  | 81  | 3.3                                  | 24.8                                  | 51                      | 0                      | 0                            | 0                                      | 51           | 0          | 0                              | 0   | 51                    | 4.1                                       | 0         | 24-Jun-18 |
| Brunei Darussalam                               | 0   | 0.0                                  | 4   | 9.6                                  | 1   | 2.4                                  | 0   | 0.0                                  | 0.4                                   | 13                      | 0                      | 13                           | 0                                      | 0            | 0          | 0                              | 0   | 0                     | 0.0                                       | 0         | 7-Aug-16  |
| Cambodia  | 0   | 0.0                                  | 18 372                                      | 1183.9                               | 56  | 3.6                                  | 10  | 0.6                                  | 16.2                                  | 518                     | 44                     | 474                          | 0                                      | 0            | 0          | 0                              | 0   | 0                     | 0.0                                       | 0         | 8-Jun-17  |
| China   | 52 485                                      | 37.8                                 | 42 864                                      | 30.7                                 | 24 839                                      | 17.7                                 | 5 993                                       | 4.3                                  | 1415.0                                | 18 372                  | 615                    | 12 935                       | 103                                    | 2 783        | 24         | 0                              | 2 910   | 4.1                   | 1   | 30-Apr-18 |           |
| China, Hong Kong SAR                            | 50  | 6.9                                  | 18  | 2.5                                  | 9   | 1.2                                  | 4   | 0.5                                  | 7.4                                   | 20                      | 0                      | 10                           | 0                                      | 10           | 0          | 0                              | 10  | 2.7                   | 0   | 21-May-18 |           |
| China, Macao SAR                                | 1   | 1.7                                  | 0   | 0.0                                  | 0   | 0.0                                  | 2   | 3.2                                  | 0.6                                   | 20                      | 1                      | 18                           | 0                                      | 1            | 0          | 0                              | 1   | 3.2                   | 0   | 6-May-18  |           |
| Japan   | 454   | 3.5                                  | 35  | 0.3                                  | 157   | 1.2                                  | 187   | 1.5                                  | 127.2                                 | 1 137                   | 61                     | 902                          | 7                                      | 167          | 0          | 0                              | 174   | 2.7                   | 0   | 30-Jun-18 |           |
| Lao People's Democratic Republic                | 70  | 10.6                                 | 56  | 8.4                                  | 8   | 1.2                                  | 3   | 0.4                                  | 7.0                                   | 446                     | 91                     | 348                          | 0                                      | 2            | 5          | 0                              | 7   | 2.0                   | 0   | 11-May-18 |           |
| Malaysia  | 222   | 7.3                                  | 1 318                                       | 42.9                                 | 1 587                                       | 50.9                                 | 1 648                                       | 52.1                                 | 32.0                                  | 5 025                   | 425                    | 3 629                        | 62                                     | 898          | 11         | 0                              | 971   | 60.6                  | 0   | 26-Jun-18 |           |
| Mongolia  | 0   | 0.0                                  | 20 374                                      | 6844.1                               | 28 813                                      | 9517.4                               | 9   | 2.9                                  | 3.1                                   | 178                     | 67                     | 111                          | 0                                      | 0            | 0          | 0                              | 0   | 0.0                   | 0   | 5-May-17  |           |
| New Zealand                                     | 274   | 60.0                                 | 13  | 2.8                                  | 104   | 22.3                                 | 15  | 3.2                                  | 4.7                                   | 37                      | 4                      | 7                            | 0                                      | 25           | 1          | 0                              | 26  | 10.9                  | 0   | 7-May-18  |           |
| Papua New Guinea                                | 2 589                                       | 333.8                                | 53  | 6.7                                  | 0   | 0.0                                  | 7   | 0.8                                  | 8.4                                   | 44                      | 0                      | 38                           | 0                                      | 6            | 0          | 0                              | 6   | 1.4                   | 0   | 3-Jul-18  |           |
| Philippines                                     | 54 669                                      | 546.1                                | 2 003                                       | 19.7                                 | 641   | 6.2                                  | 1 224                                       | 11.7                                 | 106.5                                 | 8 367                   | 3 106                  | 447                          | 3 236                                  | 1 236        | 342        | 0                              | 4 814   | 90.4                  | 21  | 21-May-18 |           |
| Republic of Korea                               | 442   | 8.8                                  | 7   | 0.1                                  | 18  | 0.4                                  | 7   | 0.1                                  | 51.2                                  | 443                     | 9                      | 419                          | 4                                      | 11           | 0          | 0                              | 15  | 0.6                   | 0   | 2-Jun-18  |           |
| Singapore                                       | 171   | 31.4                                 | 45  | 8.1                                  | 157   | 27.9                                 | 81  | 14.2                                 | 5.8                                   | 72                      | 0                      | 47                           | 0                                      | 25           | 0          | 0                              | 25  | 8.6                   | 0   | 27-May-18 |           |
| Viet Nam  | 16 741                                      | 180.9                                | 884   | 9.4                                  | 368   | 3.9                                  | 588   | 6.2                                  | 96.5                                  | 925                     | 215                    | 412                          | 136                                    | 162          | 0          | 0                              | 298   | 6.2                   | 1   | 5-Jul-18  |           |
| Pacific island countries and areas <sup>4</sup> | 279   | 87.9                                 | 20  | 6.2                                  | 6   | 1.8                                  | 1   | 0.3                                  | 3.3                                   | 50                      | 0                      | 50                           | 0                                      | 0            | 0          | 0                              | 0   | 0.0                   | 0   | 1-May-17  |           |
| <i>Fiji</i>                                     | 1   | 1.1                                  | 1   | 1.1                                  | 5   | 5.6                                  | 1   | 1.1                                  | 0.9                                   | 50                      | 0                      | 50                           | 0                                      | 0            | 0          | 0                              | 0   | 0.0                   | 0   | 1-May-17  |           |
| <i>Federated States of Micronesia</i>           | 257   | 2470.8                               | -   | -                                    | -   | -                                    | -   | -                                    | 0.1                                   | -                       | -                      | -                            | -                                      | -            | -          | -                              | -   | -                     | -   | -         | 26-Aug-14 |
| <i>Guam</i>                                     | 1   | 6.2                                  | -   | -                                    | -   | -                                    | -   | -                                    | 0.2                                   | -                       | -                      | -                            | -                                      | -            | -          | -                              | -   | -                     | -   | -         | 14-Mar-14 |
| <i>Solomon Islands</i>                          | 15  | 26.1                                 | -   | -                                    | 1   | 1.7                                  | 0   | 0.0                                  | 0.6                                   | -                       | -                      | -                            | -                                      | -            | -          | -                              | -   | -                     | -   | -         | 21-Jan-16 |
| <i>Vanuatu</i>                                  | 5   | 19.3                                 | 19  | 71.8                                 | 0   | 0.0                                  | -   | -                                    | 0.3                                   | -                       | -                      | -                            | -                                      | -            | -          | -                              | -   | -                     | -   | -         | 23-Sep-15 |
| <b>Western Pacific Region</b>                   | <b>128 786</b>                              | <b>68.9</b>                          | <b>67 768</b>                               | <b>36.0</b>                          | <b>56 868</b>                               | <b>30.1</b>                          | <b>9 860</b>                                | <b>5.2</b>                           | <b>1910.3</b>                         | <b>35 718</b>           | <b>4 638</b>           | <b>19 860</b>                | <b>3 548</b>                           | <b>5 377</b> | <b>383</b> | <b>0</b>                       | <b>9 308</b>                                    | <b>9.7</b>            | <b>23</b>                                 |           |           |

<sup>1</sup> Includes compatible, laboratory confirmed and epi-linked confirmed cases

<sup>2</sup> United Nations, Department of Economic and Social Affairs, Population Division World Population Prospects 2017 revision.

<sup>3</sup> Australia reports confirmed cases only.

<sup>4</sup> Classification is provisional based on laboratory data only.

Green <1 confirmed measles case / 1 000 000 population  
 Yellow 1-9.9 confirmed measles case / 1 000 000 population  
 Red >= 10 confirmed cases / 1 000 000 population

**Table 4. Measles surveillance performance indicators by country and area, WHO Western Pacific Region, 2017–2018 as of 20 July 2018**

| Country/area                                    | 2017                                       |   |   |  | 2018  |   |   |  |
|---|--|---|---|--|---|---|---|--|
|   | Discarded non-measles rate per 100 000 pop | Second level units with ≥ 2 discarded cases per 100 000 pop [annualized] <sup>1</sup> | Suspected cases with adequate investigation | Suspected cases with adequate specimens for laboratory confirmation <sup>2</sup> | Annualized discarded non-measles rate per 100 000 pop | Second level units with ≥ 2 discarded cases per 100 000 pop [annualized] <sup>1</sup> | Suspected cases with adequate investigation | Suspected cases with adequate specimens for laboratory confirmation <sup>2</sup> |
|   | ≥ 2  | ≥ 80%   | ≥ 80%                                       | ≥ 80%  | ≥ 2   | ≥ 80%   | ≥ 80%                                       | ≥ 80%  |
| Australia <sup>3</sup>                          | Insufficient data                          | Insufficient data   | Insufficient data                           | Insufficient data  | Insufficient data                                     | Insufficient data   | Insufficient data                           | Insufficient data  |
| Brunei Darussalam                               | 4.2  | Not applicable  | 100.0%                                      | 100.0%   | 6.0   | Not applicable  | 100.0%                                      | 100.0%   |
| Cambodia  | 5.4  | 80.0%   | 81.9%                                       | 78.8%  | 5.8   | 68.0%   | 79.5%                                       | 99.8%  |
| China   | 2.1  | 64.5%   | 97.8%                                       | 91.5%  | 1.8   | 35.5%   | 97.6%                                       | 90.8%  |
| China, Hong Kong SAR                            | 0.1  | Not applicable  | 100.0%                                      | 100.0%   | 0.0   | Not applicable  | 100.0%                                      | 90.0%  |
| China, Macao SAR                                | 2.6  | Not applicable  | 83.3%                                       | 100.0%   | 5.7   | Not applicable  | 65.0%                                       | 100.0%   |
| Japan   | 0.4  | 0.0%  | Insufficient data                           | Insufficient data  | 1.4   | 2.1%  | Insufficient data                           | Insufficient data  |
| Lao People's Democratic Republic                | 7.1  | 64.7%   | 82.1%                                       | 85.1%  | 10.0  | 88.2%   | 80.5%                                       | 83.4%  |
| Malaysia  | 19.8                                       | 93.8%   | 84.4%                                       | 91.3%  | 22.7  | 87.5%   | 89.5%                                       | 88.2%  |
| Mongolia  | 4.7  | 13.6%   | 88.3%                                       | 93.5%  | 7.1   | 45.5%   | 98.3%                                       | 94.9%  |
| New Zealand                                     | 0.4  | Insufficient data   | Insufficient data                           | Insufficient data  | 0.3   | Insufficient data   | Insufficient data                           | Insufficient data  |
| Papua New Guinea                                | 0.5  | 10.0%   | 70.6%                                       | 84.3%  | 0.9   | 5.0%  | 43.2%                                       | 50.0%  |
| Philippines                                     | 1.9  | 29.4%   | 46.0%                                       | 69.3%  | 0.8   | 11.1%   | 65.5%                                       | 56.0%  |
| Republic of Korea                               | 0.5  | 0.0%  | 71.2%                                       | 84.9%  | 1.6   | 12.5%   | 71.1%                                       | 67.9%  |
| Singapore                                       | 1.4  | Not applicable  | 65.8%                                       | 67.1%  | 1.6   | Not applicable  | 104.2%                                      | 81.9%  |
| Viet Nam  | 1.5  | 49.2%   | 55.5%                                       | 72.3%  | 0.9   | 14.3%   | 75.2%                                       | 64.6%  |
| Pacific island countries and areas <sup>4</sup> | 2.8  | 4.3%  | 87.5%                                       | 82.3%  | 3.0   | 5.0%  | 46.0%                                       | 84.0%  |
| Western Pacific Region                          | 2.2  | 36.4%   | 89.9%                                       | 89.2%  | 11.0  | 28.1%   | 87.3%                                       | 81.4%  |

<sup>1</sup> This indicator is not applicable for countries which have no second-level administrative units

<sup>2</sup> Adequate specimen defined as blood specimen collected within 28 days of rash onset or other specimen (throat swab, nasopharyngeal swab, cerebrospinal fluid, urine) collected within 5 days of rash onset; excludes epidemiologically-linked cases.

<sup>3</sup> Reports only confirmed cases

<sup>4</sup> Surveillance performance indicators refer to all the Pacific island countries and areas as one epidemiological block; each country is considered as second level unit

Green Reached or surpassed target

Yellow Nearly reached target: 1.00–1.99 for non-measles suspected case rate; 10.1–25% for percent clinically confirmed cases; 60–79% for other indicators

Red Substantially below target

Table 5. Rubella case classification and incidence by country and area, WHO Western Pacific Region, 2014–2018 as of 20 July 2018

| Country/area                                    | 2014                           |                                      | 2015                           |                                      | 2016                           |                                      | 2017                           |                                      | 2018                                  |                          |                        |                 |  |       |            |                                |   |                             |   |
|---|--------------------------------|--------------------------------------|--------------------------------|--------------------------------------|--------------------------------|--------------------------------------|--------------------------------|--------------------------------------|---------------------------------------|--------------------------|------------------------|-----------------|--|-------|------------|--------------------------------|---|-----------------------------|---|
|   | Total confirmed and compatible | Rubella incidence per 1 million pop. | Total confirmed and compatible | Rubella incidence per 1 million pop. | Total confirmed and compatible | Rubella incidence per 1 million pop. | Total confirmed and compatible | Rubella incidence per 1 million pop. | Population (in millions) <sup>1</sup> | Investigated for rubella | Pending classification | Discarded cases | Confirmed and compatible rubella cases |       |            |                                |   | Congenital rubella syndrome |   |
|   |                                |                                      |                                |                                      |                                |                                      |                                |                                      |                                       |                          |                        |                 | Compatible cases                       | Lab   | Epi-linked | Total confirmed and compatible | Annualized rubella incidence per 1 million pop. |                             |   |
| Australia                                       | -                              | -                                    | -                              | -                                    | -                              | -                                    | -                              | -                                    | 24.77                                 | -                        | -                      | -               | -                                      | -     | -          | -                              | -   | -                           | - |
| Brunei Darussalam                               | 0                              | 0.0                                  | 0                              | 0.0                                  | 0                              | 0.0                                  | 0                              | 0.0                                  | 0.43                                  | 13                       | 0                      | 13              | 0                                      | 0     | 0          | 0                              | 0   | 0.0                         | - |
| Cambodia  | 31                             | 2.0                                  | 18                             | 1.2                                  | 4                              | 0.3                                  | 7                              | 0.4                                  | 16.25                                 | 518                      | 44                     | 474             | 0                                      | 0     | 0          | 0                              | 0   | 0.0                         | - |
| China   | 11 887                         | 8.6                                  | 8 245                          | 5.9                                  | 4 476                          | 3.2                                  | 1 601                          | 1.1                                  | 1 415.05                              | 18 372                   | 615                    | 12 935          | 143                                    | 1 722 | 47         | 1 912                          | 2.7   | -                           |   |
| China, Hong Kong SAR                            | 1                              | 0.1                                  | 12                             | 1.7                                  | 3                              | 0.4                                  | 1                              | 0.1                                  | 7.43                                  | 4                        | 0                      | 0               | 1                                      | 3     | 0          | 4                              | 1.1   | -                           |   |
| China, Macao SAR                                | 0                              | 0.0                                  | 2                              | 3.3                                  | 1                              | 1.6                                  | 0                              | 0.0                                  | 0.63                                  | 19                       | 1                      | 18              | 0                                      | 0     | 0          | 0                              | 0.0   | -                           |   |
| Japan   | -                              | -                                    | 2                              | 0.0                                  | 3                              | 0.0                                  | 5                              | 0.0                                  | 127.19                                | 181                      | 0                      | 177             | 0                                      | 4     | 0          | 4                              | 0.1   | -                           |   |
| Lao People's Democratic Republic                | 18                             | 2.7                                  | 24                             | 3.6                                  | 40                             | 5.9                                  | 12                             | 1.7                                  | 6.96                                  | 446                      | 92                     | 346             | 0                                      | 7     | 1          | 8                              | 2.3   | -                           |   |
| Malaysia  | 226                            | 7.5                                  | 34                             | 1.1                                  | 68                             | 2.2                                  | 113                            | 3.6                                  | 32.04                                 | 5 069                    | 425                    | 4 581           | 0                                      | 63    | 0          | 63                             | 3.9   | -                           |   |
| Mongolia  | 0                              | 0.0                                  | 28                             | 9.4                                  | 27                             | 8.9                                  | 13                             | 4.2                                  | 3.12                                  | 112                      | 0                      | 112             | 0                                      | 0     | 0          | 0                              | 0.0   | -                           |   |
| New Zealand                                     | -                              | -                                    | -                              | -                                    | -                              | -                                    | -                              | -                                    | 4.75                                  | 0                        | -                      | -               | -                                      | -     | -          | -                              | -   | -                           |   |
| Papua New Guinea                                | -                              | -                                    | 4                              | 0.5                                  | 2                              | 0.2                                  | 1                              | 0.1                                  | 8.42                                  | 44                       | 0                      | 43              | 0                                      | 1     | 0          | 1                              | 0.2   | -                           |   |
| Philippines                                     | 343                            | 3.4                                  | 154                            | 1.5                                  | 165                            | 1.6                                  | 448                            | 4.3                                  | 106.51                                | 8 305                    | 3 106                  | 5 140           | 0                                      | 59    | 0          | 59                             | 1.1   | -                           |   |
| Republic of Korea                               | 2                              | 0.0                                  | 2                              | 0.0                                  | 3                              | 0.1                                  | 2                              | 0.0                                  | 51.16                                 | 443                      | 3                      | 439             | 0                                      | 1     | 0          | 1                              | 0.0   | -                           |   |
| Singapore                                       | 0                              | 0.0                                  | 1                              | 0.2                                  | 0                              | 0.0                                  | 3                              | 0.5                                  | 5.79                                  | 12                       | 0                      | 12              | 0                                      | 0     | 0          | 0                              | 0.0   | -                           |   |
| Viet Nam  | 50                             | 0.5                                  | 972                            | 10.4                                 | 350                            | 3.7                                  | 126                            | 1.3                                  | 96.49                                 | 818                      | 307                    | 461             | 31                                     | 19    | 0          | 50                             | 1.0   | -                           |   |
| Pacific island countries and areas <sup>2</sup> | 4                              | 1.3                                  | 1                              | 0.3                                  | 1                              | 0.3                                  | 4                              | 1.2                                  | 3.32                                  | 50                       | 8                      | 42              | 0                                      | 0     | 0          | 0                              | 0.0   | -                           |   |
| <i>Fiji</i>                                     | 4                              | 4.5                                  | 1                              | 1.1                                  | 1                              | 1.1                                  | 4                              | 4.4                                  | 0.91                                  | 50                       | 8                      | 42              | 0                                      | 0     | 0          | 0                              | 0.0   | -                           |   |
| <i>Solomon Islands</i>                          | -                              | -                                    | -                              | -                                    | -                              | -                                    | 0                              | 0.0                                  | 0.62                                  | 0                        | -                      | -               | -                                      | -     | -          | -                              | -   | -                           |   |
| <i>Vanuatu</i>                                  | 0                              | 0.0                                  | 0                              | 0.0                                  | 0                              | 0.0                                  | -                              | -                                    | 0.28                                  | 0                        | -                      | -               | -                                      | -     | -          | -                              | -   | -                           |   |
| Western Pacific Region                          | 675                            | 0.4                                  | 1 253                          | 0.7                                  | 667                            | 0.4                                  | 2 336                          | 1.2                                  | 1910.32                               | 34 406                   | 4 601                  | 24 793          | 175                                    | 1 879 | 48         | 2 102                          | 2.2   | -                           |   |

<sup>1</sup> United Nations, Department of Economic and Social Affairs, Population Division World Population Prospects 2017 revision

<sup>2</sup> Classification is provisional based on laboratory data only.

"-" No data

|        |   |
|--------|---|
| Green  | <1 confirmed measles case / 1 000 000 population    |
| Yellow | 1-9.9 confirmed measles case / 1 000 000 population |
| Red    | >= 10 confirmed cases / 1 000 000 population        |
| Gray   | No data   |

**Table 6A. Measles and rubella laboratory testing, WHO Western Pacific Region, 2017**

| Country/area                        | Laboratory | Measles and rubella |               |               | Measles       |              |                                   |  |           |   |                                     |                                |                 |                       |              |                                |              | Rubella       |            |            |            |           |
|-------------------------------------|------------|---------------------|---------------|---------------|---------------|--------------|-----------------------------------|--|-----------|---|-------------------------------------|--------------------------------|-----------------|-----------------------|--------------|--------------------------------|--------------|---------------|------------|------------|------------|-----------|
|                                     |            |                     |               |               | Serology      |              |                                   |  |           |   | Total number of lab confirmed cases | Virus detection                |                 |                       |              | Serum and blood (includes DBS) |              |               |            |            |            |           |
|                                     |            | Serum               |               |               | Blood         |              | % of samples with results ≤4 days | Measles Virus isolation/detection (swab, urine and others) |           | Measles Reverse Transcription-Polymerase Chain Reaction |                                     | Samples tested for rubella IgM | Rubella IgM (+) |                       |              | Rubella IgM equiv              |              |               |            |            |            |           |
|                                     |            | No.                 | No.           | %             | No.           | %            |                                   | No. received   | No. (+)   | No. of samples tested                                   |                                     |                                | No. of isolates | No. of samples tested | No. (+)      | No.                            | No.          | %             | No.        | %          |            |           |
| Australia                           | VIDRL      | 84                  | 84            | 69            | 13            | 7            | 53.8                              | 1  | 8%        | 0   | -                                   | 84.6                           | 1               | 0                     | 73           | 71                             | 68           | 1             | 0          | -          | 0          | -         |
| Brunei Darussalam                   | DLS        | 20                  | 20            | 20            | 20            | 0            | 0.0                               | 2  | 10%       | 0   | -                                   | 100.0                          | 0               | -                     | 0            | -                              | 0            | 20            | 0          | 0.0        | 0          | 0%        |
| Cambodia                            | NIPH       | 929                 | 929           | 929           | 774           | 10           | 1.3                               | 0  | 0%        | 155   | 0                                   | 80.6                           | 0               | -                     | 0            | -                              | 10           | 928           | 5          | 0.5        | 0          | 0%        |
| China                               | CCDC       | -                   | -             | -             | -             | -            | -                                 | -  | -         | -   | -                                   | 91.2                           | -               | -                     | -            | -                              | -            | -             | -          | -          | -          | -         |
| China, Hong Kong SAR                | PHLC       | 289                 | 289           | 242           | 248           | 4            | 1.6                               | 5  | 2%        | 0   | -                                   | 94.0                           | 7               | 3                     | 43           | 9                              | 5            | 239           | 0          | 0.0        | 2          | 1%        |
| China, Macao SAR                    | PHL        | 65                  | 65            | 65            | 65            | 3            | 4.6                               | 4  | 6%        | 0   | -                                   | 100.0                          | 0               | -                     | 6            | 2                              | 3            | 65            | 0          | 0.0        | 1          | 2%        |
| Japan                               | NIID       | 1 120               | 1 120         | 601           | 157           | 44           | 28.0                              | 22   | 14%       | 0   | -                                   | -                              | 0               | -                     | 516          | 173                            | 183          | 8             | 0          | -          | 0          | 0%        |
| Lao People's Democratic Republic    | NCLE       | 409                 | 409           | 409           | 409           | 2            | 0.5                               | 9  | 2%        | 0   | -                                   | 81.6                           | 0               | -                     | 0            | -                              | 2            | 409           | 12         | 2.9        | 14         | 3%        |
| Malaysia                            | NPHL       | 11 946              | 11 946        | 9 069         | 8 672         | 1 874        | 21.6                              | 223  | 3%        | 0   | -                                   | 95.5                           | 1 807           | 129                   | 0            | -                              | 1 922        | 6 479         | 186        | 2.9        | 176        | 3%        |
| Mongolia                            | NCCD       | 640                 | 640           | 640           | 634           | 3            | 0.5                               | 13   | 2%        | 0   | -                                   | 100.0                          | 0               | -                     | 6            | 0                              | 3            | 611           | 7          | 1.1        | 29         | 5%        |
| New Zealand                         | CHL        | 325                 | 325           | 299           | 123           | 4            | 3.3                               | 9  | 7%        | 0   | -                                   | 98.4                           | 0               | -                     | 181          | 10                             | 10           | 121           | 0          | 0.0        | 1          | 1%        |
| Papua New Guinea                    | CPHL       | 51                  | 51            | 51            | 49            | 7            | 14.3                              | 0  | 0%        | 0   | -                                   | 80.4                           | 0               | -                     | 0            | -                              | 6            | 45            | 1          | 2.2        | 2          | 4%        |
| Philippines                         | RITM       | 2 964               | 2 964         | 2 948         | 2 873         | 188          | 6.5                               | 27   | 1%        | 70  | 10                                  | 97.2                           | 172             | 6                     | 221          | 30                             | 220          | 2 862         | 313        | 10.9       | 129        | 5%        |
| Republic of Korea                   | KCDC       | 529                 | 529           | 448           | 350           | 39           | 11.1                              | 22   | 6%        | 0   | -                                   | 77.3                           | 0               | -                     | 149          | 2                              | 39           | 197           | 33         | 16.8       | 27         | 14%       |
| Singapore                           | NPHL       | 549                 | 549           | 565           | 102           | 11           | 10.8                              | 0  | 0%        | 0   | -                                   | 100.0                          | 45              | 20                    | 458          | 52                             | 62           | 96            | 12         | 12.5       | 0          | 0%        |
| Viet Nam national lab (Northern)    | NIHE       | 620                 | 620           | 620           | 611           | 15           | 2.5                               | 6  | 1%        | 0   | -                                   | 97.9                           | 8               | 1                     | 9            | 0                              | 16           | 611           | 18         | 2.9        | 36         | 6%        |
| Viet Nam national lab (Southern)    | PI         | 366                 | 366           | 342           | 333           | 10           | 3.0                               | 5  | 2%        | 0   | -                                   | 88.9                           | 33              | 0                     | 33           | 0                              | 10           | 333           | 52         | 15.6       | 20         | 6%        |
| Viet Nam subnational lab (Central)  | PI         | 214                 | 214           | 214           | 213           | 0            | -                                 | 2  | 1%        | 0   | -                                   | 37.6                           | 0               | -                     | 1            | 0                              | 0            | 213           | 3          | -          | 2          | 1%        |
| Viet Nam subnational lab (Highland) | IHE        | 65                  | 65            | 65            | 65            | 0            | -                                 | 0  | 0%        | 0   | -                                   | 33.8                           | 0               | -                     | 0            | -                              | 0            | 65            | 0          | 0.0        | 0          | 0%        |
| Fiji                                | FCCDC      | 93                  | 93            | 93            | 85            | 1            | 1.2                               | 0  | 0%        | 4   | 0                                   | -                              | 0               | -                     | 0            | -                              | 1            | 88            | 4          | 4.5        | 2          | 2%        |
| <b>Total</b>                        |            | <b>21 278</b>       | <b>21 278</b> | <b>17 689</b> | <b>15 796</b> | <b>2 222</b> | <b>14.1</b>                       | <b>350</b>   | <b>2%</b> | <b>229</b>  | <b>10</b>                           | <b>93.4</b>                    | <b>2 073</b>    | <b>159</b>            | <b>1 696</b> | <b>349</b>                     | <b>2 560</b> | <b>13 391</b> | <b>646</b> | <b>4.8</b> | <b>441</b> | <b>3%</b> |

"-" No data

**Table 6B. Measles and rubella laboratory testing, WHO Western Pacific Region, 2018 as of 20 July 2018**

| Country/area                        | Laboratory | Measles and rubella |               |               | Measles       |              |   |  |           |   |                 |                                |                       |            |                                     |                                |              | Rubella      |            |           |            |           |   |
|-------------------------------------|------------|---------------------|---------------|---------------|---------------|--------------|---|--|-----------|---|-----------------|--------------------------------|-----------------------|------------|-------------------------------------|--------------------------------|--------------|--------------|------------|-----------|------------|-----------|---|
|                                     |            |                     |               |               | Serology      |              |   |  |           |   | Virus detection |                                |                       |            | Total number of lab confirmed cases | Serum and blood (includes DBS) |              |              |            |           |            |           |   |
|                                     |            | Serum               |               |               | Blood         |              | % of samples with results $\leq 4$ days | Measles Virus isolation/detection (swab, urine and others) |           | Measles Reverse Transcription-Polymerase Chain Reaction |                 | Samples tested for rubella IgM | Rubella IgM (+)       |            |                                     | Rubella IgM equiv              |              |              |            |           |            |           |   |
|                                     |            | No.                 | No.           | %             | No.           | %            |   | No. received   | No. (+)   | No. of samples tested                                   | No. of isolates |                                | No. of samples tested | No. (+)    |                                     | No.                            | No.          | %            | No.        | %         |            |           |   |
| Australia                           | VIDRL      | 54                  | 54            | 41            | 9             | 9            | 100.0                                   | 0  | 0%        | 0   | -               | 66.7                           | 0                     | -          | 45                                  | 45                             | 41           | 0            | -          | -         | -          | -         | - |
| Brunei Darussalam                   | DLS        | 13                  | 13            | 13            | 13            | 0            | 0.0                                     | 0  | 0%        | 0   | -               | 100.0                          | 0                     | -          | 0                                   | -                              | 0            | 13           | 0          | 0%        | 0          | 0%        |   |
| Cambodia                            | NIPH       | 409                 | 409           | 409           | 412           | 0            | 0.0                                     | 0  | 0%        | 62  | 0               | 47.8                           | 0                     | -          | 0                                   | -                              | 0            | 410          | 0          | 0%        | 0          | 0%        |   |
| China                               | CCDC       | -                   | -             | -             | -             | -            | -                                       | -  | -         | -   | -               | 91.2                           | -                     | -          | -                                   | -                              | -            | -            | -          | -         | -          | -         | - |
| China, Hong Kong SAR                | PHLC       | 302                 | 302           | 240           | 223           | 10           | 4.5                                     | 3  | 1%        | 0   | -               | 89.0                           | 5                     | 1          | 77                                  | 9                              | 13           | 200          | 5          | 3%        | 4          | 2%        |   |
| China, Macao SAR                    | PHL        | 91                  | 91            | 91            | 91            | 2            | 2.2                                     | 3  | 3%        | 0   | -               | 100.0                          | 0                     | -          | 3                                   | 1                              | 2            | 90           | 7          | 8%        | 0          | 0%        |   |
| Japan                               | NIID       | 1 824               | 1 614         | 927           | 190           | 20           | 10.5                                    | 25   | 13%       | 0   | -               | -                              | 0                     | -          | 702                                 | 159                            | 169          | 4            | 1          | -         | 0          | -         |   |
| Lao People's Democratic Republic    | NCLE       | 373                 | 373           | 373           | 352           | 2            | 0.6                                     | 5  | 1%        | 0   | -               | 95.5                           | 0                     | -          | 0                                   | -                              | 2            | 349          | 7          | 2%        | 23         | 7%        |   |
| Malaysia                            | NPHL       | 7 960               | 7 960         | 5 606         | 5 339         | 1 057        | 19.8                                    | 151  | 3%        | 0   | -               | 94.0                           | 1 253                 | 89         | 0                                   | -                              | 1 083        | 3 362        | 146        | 4%        | 94         | 3%        |   |
| Mongolia                            | NCCD       | 157                 | 157           | 157           | 157           | 0            | 0.0                                     | 0  | 0%        | 0   | -               | 100.0                          | 0                     | -          | 0                                   | -                              | 0            | 156          | 1          | 1%        | 0          | 0%        |   |
| New Zealand                         | CHL        | 277                 | 277           | 235           | 60            | 9            | 15.0                                    | 1  | 2%        | 0   | -               | 95.0                           | 1                     | 0          | 199                                 | 24                             | 27           | 27           | 0          | 0%        | 3          | 11%       |   |
| Papua New Guinea                    | CPHL       | 39                  | 39            | 39            | 39            | 3            | 7.7                                     | 0  | 0%        | 0   | -               | 84.6                           | 0                     | -          | 0                                   | -                              | 3            | 39           | 1          | 3%        | 0          | 0%        |   |
| Philippines                         | RITM       | 6 968               | 6 968         | 6 883         | 6 539         | 1 118        | 17.1                                    | 34   | 1%        | 106   | 6               | 13.6                           | 974                   | 174        | 978                                 | 719                            | 1 713        | 4 207        | 69         | 2%        | 31         | 1%        |   |
| Republic of Korea                   | KCDC       | 436                 | 436           | 332           | 309           | 31           | 10.0                                    | 32   | 10%       | 0   | -               | 61.1                           | 6                     | 1          | 161                                 | 26                             | 51           | 202          | 24         | 12%       | 31         | 15%       |   |
| Singapore                           | NPHL       | 321                 | 321           | 316           | 26            | 4            | 15.4                                    | 0  | 0%        | 0   | -               | 100.0                          | 21                    | 6          | 215                                 | 25                             | 29           | 24           | 2          | 8%        | 0          | 0%        |   |
| Viet Nam national lab (Northern)    | NIHE       | 458                 | 458           | 414           | 300           | 116          | 38.7                                    | 12   | 4%        | 0   | -               | 98.3                           | 157                   | 0          | 165                                 | 120                            | 204          | 300          | 14         | 5%        | 7          | 2%        |   |
| Viet Nam national lab (Southern)    | PI         | 137                 | 137           | 130           | 121           | 5            | 4.1                                     | 0  | 0%        | 0   | -               | 94.2                           | 16                    | 0          | 16                                  | 0                              | 5            | 121          | 10         | 8%        | 5          | 4%        |   |
| Viet Nam subnational lab (Central)  | PI         | 135                 | 135           | 135           | 133           | 0            | 0.0                                     | 1  | 1%        | 0   | -               | 56.1                           | 0                     | -          | 2                                   | 0                              | 1            | 133          | 2          | 2%        | 0          | 0%        |   |
| Viet Nam subnational lab (Highland) | IHE        | 21                  | 21            | 21            | 21            | 0            | 0.0                                     | 0  | 0%        | 0   | -               | 9.5                            | 0                     | -          | 0                                   | -                              | 0            | 21           | 0          | 0%        | 0          | 0%        |   |
| Fiji                                | FCCDC      | 53                  | 47            | 47            | 47            | 0            | 0.0                                     | 3  | 6%        | 6   | 0               | No data                        | 0                     | -          | 0                                   | -                              | 0            | 47           | 0          | 0%        | 2          | 4%        |   |
| <b>Total</b>                        |            | <b>20 028</b>       | <b>19 812</b> | <b>16 409</b> | <b>14 381</b> | <b>2 386</b> | <b>16. 6</b>                            | <b>270</b>   | <b>2%</b> | <b>174</b>  | <b>6</b>        | <b>74.4</b>                    | <b>2 433</b>          | <b>271</b> | <b>2 563</b>                        | <b>1 128</b>                   | <b>3 343</b> | <b>9 705</b> | <b>289</b> | <b>3%</b> | <b>200</b> | <b>2%</b> |   |

"-" No data

Figure 3. Measles genotype distribution of cases with rash onset in 2017 and 2018, WHO Western Pacific Region

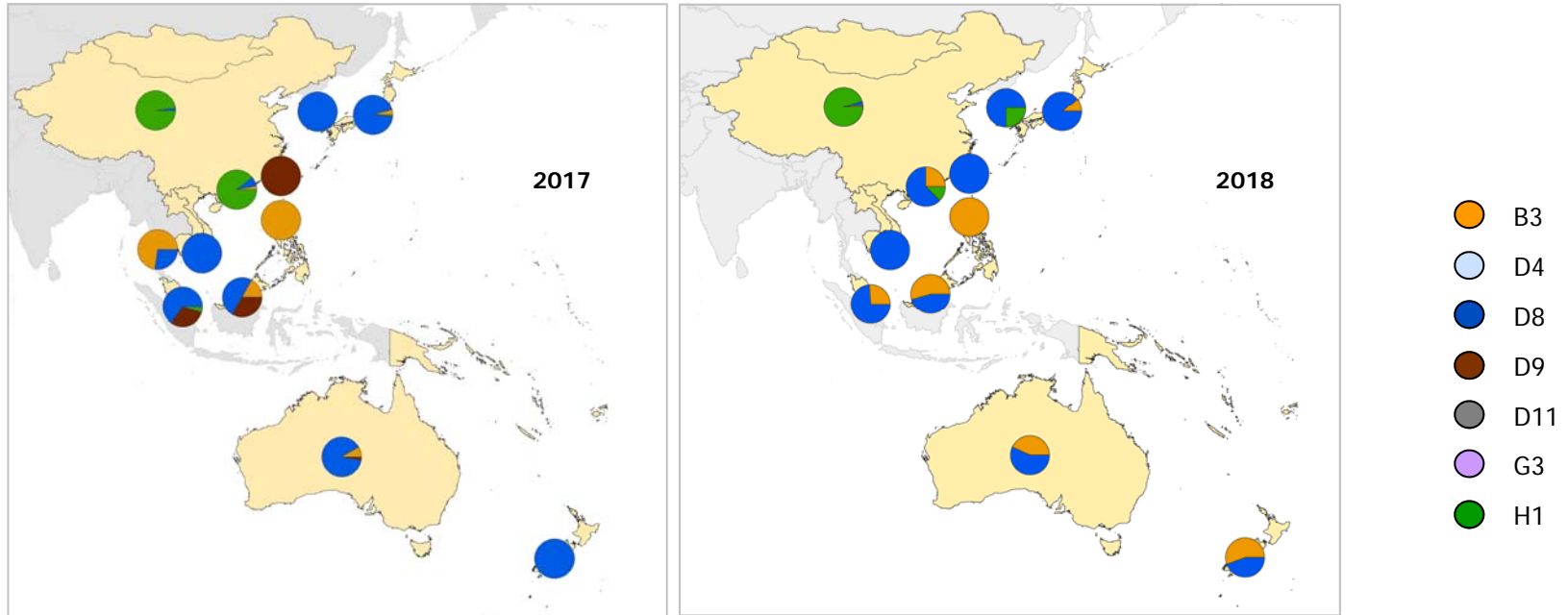


Table 7. Measles genotype distribution of cases with rash onset in July 2017 to June 2018, WHO Western Pacific Region

| Country/area                       | 2017 |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    | 2018 |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
|------------------------------------|------|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|------|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|--|--|--|--|---|--|--|--|
|                                    | Jul  |    |    |    | Aug |    |    |    | Sep |    |    |    | Oct |    |    |    | Nov  |    |    |    | Dec |    |    |    | Jan |    |    |    | Feb |    |    |    | Mar |    |    |    | Apr |    |    |    | May |    |    |    | Jun |    |    |    |  |  |  |  |   |  |  |  |
|                                    | B3   | D8 | D9 | H1 | B3  | D8 | D9 | H1 | B3  | D8 | D9 | H1 | B3  | D8 | D9 | H1 | B3   | D8 | D9 | H1 | B3  | D8 | D9 | H1 | B3  | D8 | D9 | H1 | B3  | D8 | D9 | H1 | B3  | D8 | D9 | H1 | B3  | D8 | D9 | H1 | B3  | D8 | D9 | H1 | B3  | D8 | D9 | H1 |  |  |  |  |   |  |  |  |
| Australia                          |      |    |    |    | 2   | 1  |    |    | 2   | 2  |    |    | 1   | 10 |    |    | 4    | 2  |    |    | 1   |    |    |    | 1   | 2  |    |    | 1   |    |    |    | 10  | 9  |    |    | 2   | 6  |    |    | 1   | 4  |    |    | 1   |    |    |    |  |  |  |  |   |  |  |  |
| Brunei Darussalam                  |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Cambodia                           |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| China                              |      |    |    | 17 |     |    |    | 20 |     |    |    | 16 | 2   | 8  | 1  | 5  |      |    |    | 11 |     |    |    | 14 |     |    |    | 23 | 3   | 39 | 1  |    | 12  | 1  |    |    | 5   |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| China, Hong Kong SAR               |      |    |    |    |     |    |    |    | 1   |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     |    |    |    | 1   | 1  |    |    | 2   | 1  | 2  |    |     |    |    |    | 1   |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| China, Macao SAR                   |      |    |    | 2  |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Japan                              | 2    |    |    |    |     | 8  |    |    |     |    |    | 8  |     |    |    |    |      |    |    |    |     |    |    |    | 1   | 5  |    |    | 2   | 4  |    | 9  |     | 11 |    |    | 1   | 8  |    |    | 1   | 4  |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Lao People's Democratic Republic   |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Malaysia                           |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    | 4   | 5  |    |    | 1   |    |    | 1  |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Mongolia                           |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| New Zealand                        |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     | 1  |    |    | 4   |    | 2  | 2  |     | 7  | 1  |    |     |    | 1  |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Papua New Guinea                   |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Philippines                        |      |    |    |    | 2   |    |    |    | 1   |    |    |    | 1   |    |    |    | 2    |    |    |    |     |    |    |    |     |    |    |    | 17  |    |    |    | 4   |    |    |    | 19  |    |    |    | 12  |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Republic of Korea                  |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Singapore                          |      | 1  | 1  |    |     | 1  |    |    | 3   | 1  |    |    |     | 2  |    |    |      | 1  |    |    |     | 5  | 1  |    |     | 1  | 4  |    |     |    |    |    | 2   |    |    |    | 2   | 2  |    |    | 2   | 3  |    |    | 1   | 2  |    |    |  |  |  |  | 1 |  |  |  |
| Viet Nam                           |      |    |    |    |     |    |    |    |     |    |    | 3  |     |    |    |    |      |    |    | 9  |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |
| Pacific island countries and areas |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |      |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |  |  |  |  |   |  |  |  |

Sources: Includes all cases reported to the Western Pacific Regional Office by 20 July 2018 and the Measles Nucleotide Surveillance online database (MeANS).





**Table 9A. Completeness and timeliness of epidemiologic reporting, WHO Western Pacific Region, 2017–2018**

| Country                            | 2017                      |                         | 2018 <sup>1</sup> |        |        |        |        |        |                           |                         |
|------------------------------------|---------------------------|-------------------------|-------------------|--------|--------|--------|--------|--------|---------------------------|-------------------------|
|                                    | Completeness <sup>2</sup> | Timeliness <sup>3</sup> | Jan               | Feb    | Mar    | Apr    | May    | Jun    | Completeness <sup>2</sup> | Timeliness <sup>3</sup> |
| Australia                          | 100%                      | 100%                    | 08 Feb            | 08 Mar | 10 Apr | 16 May | 12 Jun | 09 Jul | 100%                      | 83%                     |
| Brunei Darussalam                  | 100%                      | 100%                    | 07 Feb            | 06 Mar | 07 Apr | 07 May | 05 Jun | 07 Jul | 100%                      | 100%                    |
| Cambodia                           | 100%                      | 100%                    | 10 Feb            | 10 Mar | 10 Apr | 10 May | 10 Jun | 10 Jul | 100%                      | 100%                    |
| China                              | 100%                      | 75%                     | 13 Feb            | 12 Mar | 15 Apr | 16 May | 05 Jul | 12 Jul | 100%                      | 83%                     |
| China, Hong Kong SAR               | 100%                      | 100%                    | 06 Feb            | 06 Mar | 09 Apr | 07 May | 06 Jun | 09 Jul | 100%                      | 100%                    |
| China, Macao SAR                   | 100%                      | 100%                    | 08 Feb            | 08 Mar | 04 Apr | 07 May | 06 Jun | 09 Jul | 100%                      | 100%                    |
| Japan                              | 100%                      | 92%                     | 09 Feb            | 10 Mar | 10 Apr | 10 May | 10 Jun | 10 Jul | 100%                      | 100%                    |
| Lao People's Democratic Republic   | 100%                      | 100%                    | 10 Feb            | 10 Mar | 10 Apr | 10 May | 10 Jun | 10 Jul | 100%                      | 100%                    |
| Malaysia                           | 100%                      | 100%                    | 08 Feb            | 09 Mar | 06 Apr | 10 May | 10 Jun | 10 Jul | 100%                      | 100%                    |
| Mongolia                           | 100%                      | 100%                    | 10 Feb            | 10 Mar | 10 Apr | 10 May | 10 Jun | 10 Jul | 100%                      | 100%                    |
| New Zealand                        | 100%                      | 100%                    | 08 Feb            | 07 Mar | 10 Apr | 08 May | 06 Jun | 05 Jul | 100%                      | 100%                    |
| Papua New Guinea                   | 100%                      | 92%                     | -                 | 14 Mar | 17 Apr | 10 May | 08 Jun | 17 Jul | 83%                       | 33%                     |
| Philippines                        | 58%                       | 25%                     | 02 Mar            | -      | 27 Apr | 22 May | 21 Jun | -      | 67%                       | 0%                      |
| Republic of Korea                  | 100%                      | 92%                     | 08 Feb            | 10 Mar | 10 Apr | 10 May | 10 Jun | 13 Jul | 100%                      | 83%                     |
| Singapore                          | 100%                      | 92%                     | 08 Feb            | 10 Mar | 07 Apr | 10 May | 07 Jun | 07 Jul | 100%                      | 100%                    |
| Viet Nam                           | 100%                      | 92%                     | 09 Feb            | 09 Mar | 10 Apr | 09 May | 08 Jun | 09 Jul | 100%                      | 100%                    |
| Pacific island countries and areas | 100%                      | 67%                     | 16 Feb            | 10 Mar | 07 Apr | 14 May | 08 Jun | 13 Jul | 100%                      | 83%                     |
| Completeness                       | 98%                       |                         | 94%               | 94%    | 100%   | 100%   | 100%   | 94%    | 97%                       |                         |
| Timeliness                         |                           | 92%                     | 82%               | 88%    | 88%    | 88%    | 88%    | 82%    |                           | 86%                     |

<sup>1</sup> National measles surveillance monthly reports from June 2018.

Legend: black = timely report; red = untimely report

<sup>2</sup> Completeness is defined as the number of reports received by the end of the (day) of the following month; Pacific island countries and areas and China may report to the Regional Office by the 15th (or the next working day) of the

**Table 9B. Completeness and timeliness of laboratory reporting, WHO Western Pacific Region, 2017–2018**

| Country/area                        | 2017                      |                         | 2018 <sup>1</sup> |        |        |        |        |        |                           |                         | Genotype results by source of data |                    |         |                    |
|-------------------------------------|---------------------------|-------------------------|-------------------|--------|--------|--------|--------|--------|---------------------------|-------------------------|------------------------------------|--------------------|---------|--------------------|
|                                     | Completeness <sup>2</sup> | Timeliness <sup>3</sup> | Jan               | Feb    | Mar    | Apr    | May    | Jun    | Completeness <sup>2</sup> | Timeliness <sup>3</sup> | Measles                            |                    | Rubella |                    |
|                                     |                           |                         |                   |        |        |        |        |        |                           |                         | MeaNS                              | Submission to WPRO | Rubens  | Submission to WPRO |
| Australia                           | 100%                      | 100%                    | 07 Feb            | 01 Mar | 04 Apr | 04 May | 07 Jun | 06 Jul | 100%                      | 100%                    | 34                                 | 38                 | 0       | 0                  |
| Brunei Darussalam                   | 100%                      | 100%                    | 05 Feb            | 01 Mar | 31 Mar | 07 May | 30 May | 30 Jun | 100%                      | 100%                    | 0                                  | 0                  | 0       | 0                  |
| Cambodia                            | 100%                      | 100%                    | 10 Feb            | 10 Mar | 10 Apr | 10 May | 10 Jun | 10 Jul | 100%                      | 100%                    | 0                                  | 0                  | 0       | 0                  |
| China                               | 100%                      | 100%                    | 06 Feb            | 06 Mar | 02 Apr | 02 May | 05 Jun | 02 Jul | 100%                      | 100%                    | 19                                 | 98                 | 18      | 17                 |
| China, Hong Kong SAR                | 100%                      | 100%                    | 06 Feb            | 06 Mar | 10 Apr | 07 May | 07 Jun | 09 Jul | 100%                      | 100%                    | 7                                  | 8                  | 0       | 2                  |
| China, Macao SAR                    | 100%                      | 100%                    | 08 Feb            | 09 Mar | 06 Apr | 08 May | 10 Jun | 06 Jul | 100%                      | 100%                    | 1                                  | 1                  | 0       | 0                  |
| Japan                               | 100%                      | 92%                     | 09 Feb            | 10 Mar | 10 Apr | 10 May | 10 Jun | 10 Jul | 100%                      | 100%                    | 4                                  | 47                 | 4       | 0                  |
| Lao People's Democratic Republic    | 100%                      | 100%                    | 10 Feb            | 10 Mar | 10 Apr | 10 May | 10 Jun | 10 Jul | 100%                      | 100%                    | 0                                  | 0                  | 0       | 0                  |
| Malaysia                            | 100%                      | 100%                    | 09 Feb            | 09 Mar | 11 Apr | 14 May | 02 Jul | 10 Jul | 100%                      | 67%                     | 11                                 | 0                  | 0       | 0                  |
| Mongolia                            | 100%                      | 83%                     | 10 Feb            | 10 Mar | 10 Apr | 10 May | 10 Jun | 10 Jul | 100%                      | 100%                    | 0                                  | 0                  | 0       | 0                  |
| New Zealand                         | 100%                      | 100%                    | 08 Feb            | 07 Mar | 10 Apr | 08 May | 05 Jun | 05-Jul | 100%                      | 100%                    | 18                                 | 18                 | 0       | 0                  |
| Papua New Guinea                    | 100%                      | 67%                     | 08 Feb            | 10 Mar | 04 Apr | 10 May | 08 Jun | 04 Jul | 100%                      | 100%                    | 0                                  | 0                  | 0       | 0                  |
| Philippines                         | 100%                      | 92%                     | 10 Feb            | 10 Mar | 10 Apr | 09 May | 13 Jun | 10 Jul | 100%                      | 83%                     | 35                                 | 35                 | 0       | 0                  |
| Republic of Korea                   | 100%                      | 100%                    | 09 Feb            | 09 Mar | 10 Apr | 10 May | 08 Jun | 10 Jul | 100%                      | 100%                    | 3                                  | 10                 | 0       | 0                  |
| Singapore                           | 100%                      | 100%                    | 08 Feb            | 10 Mar | 07 Apr | 10 May | 07 Jun | 07 Jul | 100%                      | 100%                    | 15                                 | 19                 | 1       | 1                  |
| Viet Nam national lab (Northern)    | 100%                      | 100%                    | 09 Feb            | 05 Mar | 09 Apr | 09 May | 06 Jun | 10 Jul | 100%                      | 100%                    | 33                                 | 16                 | 0       | 0                  |
| Viet Nam national lab (Southern)    | 100%                      | 100%                    | 08 Feb            | 08 Mar | 09 Apr | 09 May | 10 Jun | 09 Jul | 100%                      | 100%                    | 0                                  | 0                  | 0       | 0                  |
| Viet Nam subnational lab (Central)  | 100%                      | 100%                    | 09 Feb            | 05 Mar | 09 Apr | 09 May | 06 Jun | 10 Jul | 100%                      | 100%                    | 0                                  | 0                  | 0       | 0                  |
| Viet Nam subnational lab (Highland) | 100%                      | 100%                    | 09 Feb            | 05 Mar | 09 Apr | 09 May | 06 Jun | 10 Jul | 100%                      | 100%                    | 0                                  | 0                  | 0       | 0                  |
| Fiji                                | 100%                      | 75%                     | 16 Feb            | 16 Mar | 07 Apr | 14 May | 08 Jun | 13 Jul | 100%                      | 67%                     | 0                                  | 0                  | 0       | 0                  |
| Completeness                        | 100%                      |                         | 100%              | 100%   | 100%   | 100%   | 100%   | 100%   | 100%                      |                         | 180                                | 290                | 23      | 20                 |
| Timeliness                          |                           | 95%                     | 95%               | 95%    | 100%   | 95%    | 90%    | 100%   |                           | 96%                     |                                    |                    |         |                    |

<sup>1</sup> National measles laboratory monthly reports from June 2018.

<sup>2</sup> Completeness is defined as the number of reports received by the end of the reporting month divided by the number of expected reports for the year.

<sup>3</sup> National measles and rubella laboratories should submit monthly reports by the 10th (or the next working day) of the following month.

**Expanded Programme on Immunization  
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World Health Organization**

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*Please send your comments and monthly data before the 10th of the month to:*

**WPROEPIdata@who.int**

*More detailed information available in the  
Regional and country profile of measles elimination*