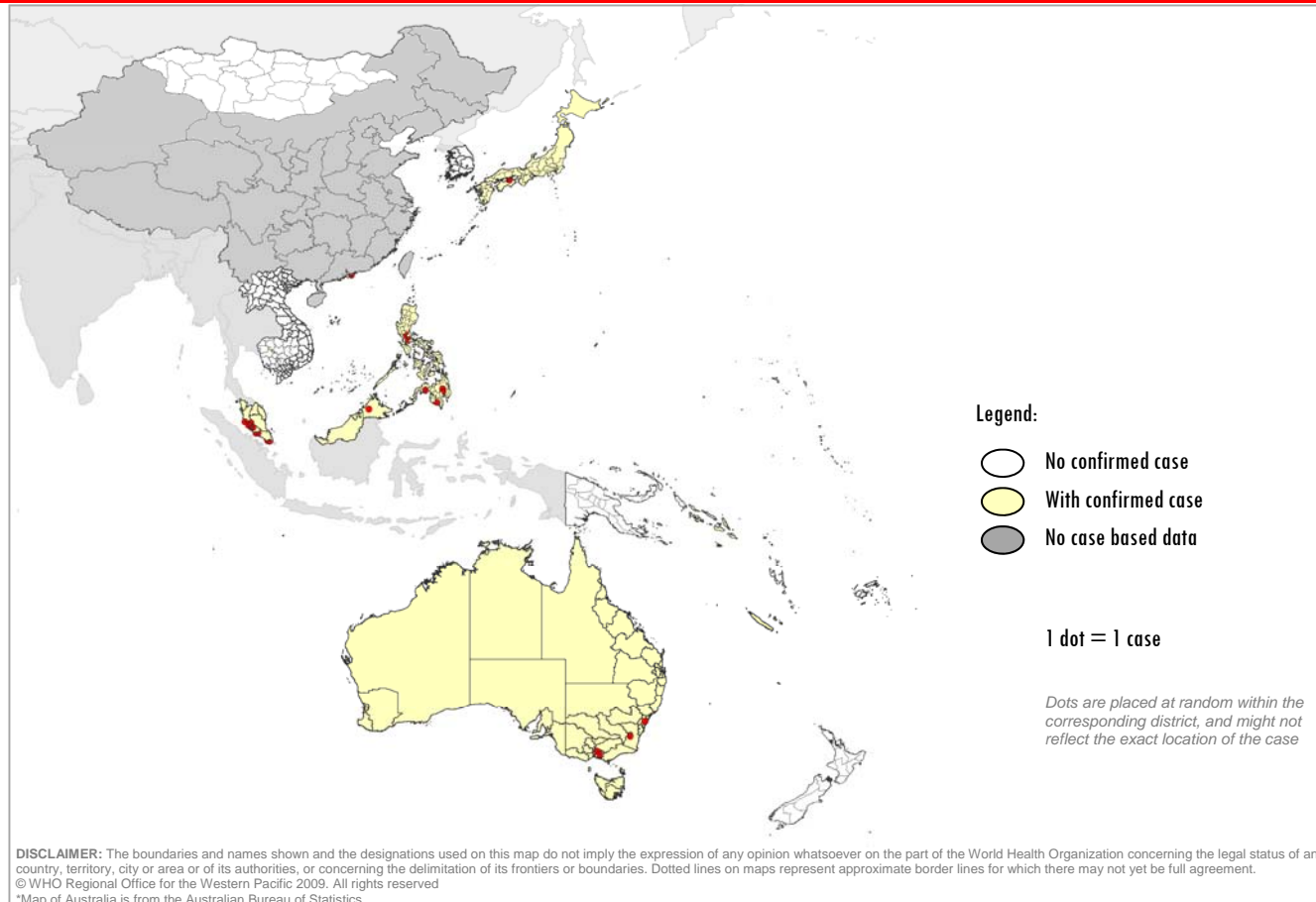


# MEASLES-RUBELLA

Figure 1. Distribution of confirmed measles cases with rash onset 1–28 February 2015, WHO Western Pacific Region



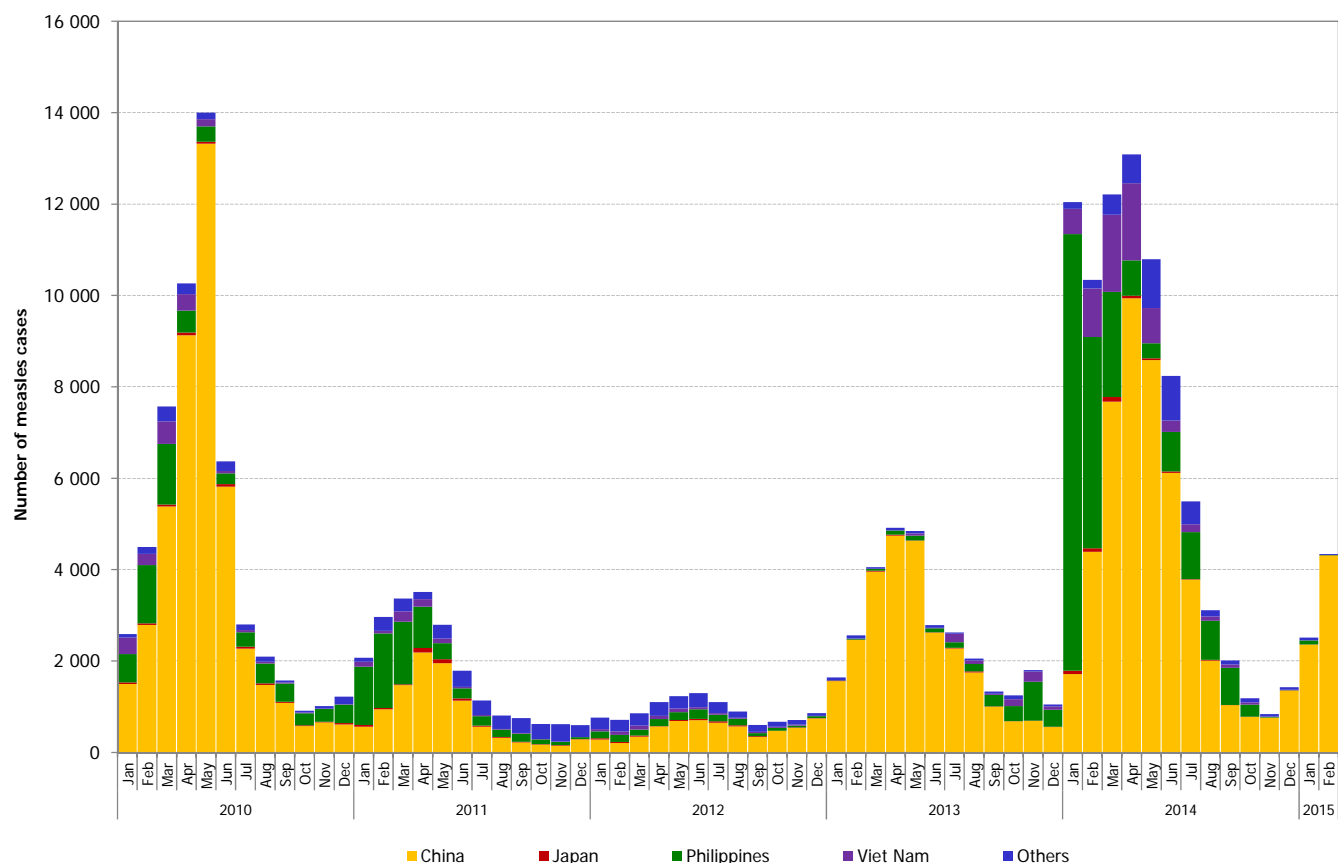
Source: Measles and rubella monthly country reports to the Western Pacific Regional Office by 20 March 2015

Table 1. Confirmed measles cases by month of onset, March 2014 – February 2015, WHO Western Pacific Region

| Country                            | 2014   |        |       |      |      |      |      |      |     |      | 2015 |      |
|------------------------------------|--------|--------|-------|------|------|------|------|------|-----|------|------|------|
|                                    | Mar    | Apr    | May   | Jun  | Jul  | Aug  | Sep  | Oct  | Nov | Dec  | Jan  | Feb  |
| Australia                          | 36     | 15     | 23    | 34   | 32   | 23   | 2    | 17   | 5   | 14   | 10   | 4    |
| 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                              | 7675   | 9936   | 8587  | 6113 | 3779 | 2007 | 1033 | 778  | 755 | 1356 | 2359 | 4312 |
| China, Hong Kong SAR               | 7      | 3      | 5     | 4    | 7    | 3    | 3    | 1    | 0   | 0    | 0    | 1    |
| China, Macao SAR                   | 0      | 0      | 0     | 1    | 0    | 0    | 0    | 0    | 0   | 0    | 0    | 0    |
| Japan                              | 102    | 60     | 37    | 38   | 12   | 19   | 5    | 2    | 6   | 2    | 1    | 1    |
| Lao People's Democratic Republic   | 0      | 0      | 4     | 0    | 0    | 0    | 28   | 36   | 1   | 0    | 0    | 0    |
| Malaysia                           | 62     | 12     | 19    | 18   | 19   | 19   | 17   | 23   | 7   | 10   | 15   | 12   |
| Mongolia                           | 0      | 0      | 0     | 0    | 0    | 0    | 0    | 0    | 0   | 0    | 0    | 0    |
| New Zealand                        | 36     | 12     | 16    | 98   | 31   | 5    | 0    | 1    | 3   | 0    | 0    | 0    |
| Papua New Guinea                   | 231    | 497    | 777   | 640  | 259  | 64   | 29   | 10   | 37  | 31   | 27   | 0    |
| Philippines                        | 2302   | 773    | 330   | 861  | 1031 | 857  | 811  | 263  | 16  | 3    | 87   | 6    |
| Republic of Korea                  | 59     | 70     | 204   | 44   | 25   | 3    | 2    | 1    | 0   | 0    | 0    | 0    |
| Singapore                          | 16     | 18     | 10    | 6    | 12   | 9    | 0    | 2    | 0   | 2    | 2    | 3    |
| Viet Nam                           | 1684   | 1687   | 767   | 252  | 170  | 93   | 77   | 50   | 9   | 9    | 8    | 0    |
| Pacific island countries and areas | 3      | 3      | 12    | 128  | 114  | 9    | 3    | 2    | 0   | 0    | 3    | 0    |
| Western Pacific Region             | 12 213 | 13 086 | 10791 | 8237 | 5491 | 3111 | 2010 | 1186 | 839 | 1427 | 2512 | 4339 |

Source: Case based and aggregate data reports to the Western Pacific Regional Office by 20 March 2015

Figure 2. Measles cases by month of onset, WHO Western Pacific Region, 2010–2015<sup>1</sup>



Source: Measles and rubella monthly country reports to WHO by 20 March 2015

<sup>1</sup> Includes laboratory confirmed, epi-linked and clinically confirmed cases for 2010–2012

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

| Countries and areas                | Year verified | 2014                   |                     |                |               |            | 2015                   |                     |                |              |           |
|------------------------------------|---------------|------------------------|---------------------|----------------|---------------|------------|------------------------|---------------------|----------------|--------------|-----------|
|                                    |               | No. of confirmed cases | Source of infection |                |               |            | No. of confirmed cases | Source of infection |                |              |           |
|                                    |               |                        | Imported            | Import-related | Unknown       | Endemic    |                        | Imported            | Import-related | Unknown      | Endemic   |
| Australia                          | 2014          | 340                    | 132                 | 101            | 93            | 0          | 14                     | 6                   | 2              | 6            | 0         |
| Brunei Darussalam                  | 2015          | 0                      | -                   | -              | -             | -          | 0                      | -                   | -              | -            | -         |
| Cambodia                           | 2015          | 0                      | -                   | -              | -             | -          | 0                      | -                   | -              | -            | -         |
| China                              | -             | 48 123                 | 0                   | 0              | 48 123        | 0          | 6 671                  | 0                   | 0              | 6 671        | 0         |
| China, Hong Kong SAR               | -             | 46                     | 18                  | 3              | 0             | 25         | 1                      | 1                   | 0              | 0            | 0         |
| China, Macao SAR                   | 2014          | 1                      | 1                   | 0              | 0             | 0          | 0                      | -                   | -              | -            | -         |
| Japan                              | 2015          | 434                    | 0                   | 0              | 434           | 0          | 2                      | 1                   | 0              | 1            | 0         |
| Lao People's Democratic Republic   | -             | 70                     | 0                   | 0              | 70            | 0          | 0                      | -                   | -              | -            | -         |
| Malaysia                           | -             | 214                    | 66                  | 0              | 52            | 96         | 28                     | 1                   | 0              | 14           | 13        |
| Mongolia                           | 2014          | 0                      | -                   | -              | -             | -          | 0                      | -                   | -              | -            | -         |
| New Zealand                        | -             | 263                    | 0                   | 0              | 263           | 0          | 0                      | -                   | -              | -            | -         |
| Papua New Guinea                   | -             | 2 576                  | 0                   | 0              | 2 576         | 0          | 27                     | 0                   | 0              | 27           | 0         |
| Philippines                        | -             | 21 420                 | 0                   | 0              | 36            | 0          | 93                     | 0                   | 0              | 93           | 0         |
| Republic of Korea                  | 2014          | 442                    | 21                  | 407            | 14            | 0          | 0                      | -                   | -              | -            | -         |
| Singapore                          | -             | 134                    | 37                  | 0              | 67            | 30         | 5                      | 0                   | 0              | 0            | 5         |
| Viet Nam                           | -             | 6 498                  | 0                   | 0              | 6 498         | 0          | 8                      | 0                   | 0              | 8            | 0         |
| Pacific island countries and areas | -             | 268                    | 0                   | 0              | 268           | 0          | 3                      | 0                   | 0              | 3            | 0         |
| <b>Total</b>                       | -             | <b>80 829</b>          | <b>275</b>          | <b>511</b>     | <b>58 494</b> | <b>151</b> | <b>6 852</b>           | <b>9</b>            | <b>2</b>       | <b>6 823</b> | <b>18</b> |

Source: Measles and rubella monthly country reports to WHO by 20 March 2015

**Table 3. Measles case classification and incidence by country and area, WHO Western Pacific Region, 2011–2015 <sup>1</sup>**

| Country   | 2011                         |                                      | 2012                         |                                      | 2013            |                                      | 2014            |                                      | 2015                                  |                         |                         |            |           |   |                  |                              |                        | Rash onset of last confirmed measles case |                       |
|---|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-----------------|--------------------------------------|-----------------|--------------------------------------|---------------------------------------|-------------------------|-------------------------|------------|-----------|---|------------------|------------------------------|------------------------|---|-----------------------|
|   | Total confirmed <sup>2</sup> | Measles incidence per 1 million pop. | Total confirmed <sup>2</sup> | Measles incidence per 1 million pop. | Total confirmed | Measles incidence per 1 million pop. | Total confirmed | Measles incidence per 1 million pop. | Population (in millions) <sup>3</sup> | Suspected measles cases | Confirmed measles cases |            |           | Annualized measles incidence per 1 million pop. | Compatible cases | Discarded cases <sup>5</sup> | Pending classification |   | Deaths due to measles |
|   |                              |                                      |                              |                                      |                 |                                      |                 |                                      |                                       |                         | Lab                     | Epi-linked | Confirmed |   |                  |                              |                        |   |                       |
| Australia                                       | 192                          | 8.5                                  | 199                          | 8.7                                  | 154             | 6.6                                  | 340             | 14.5                                 | 22.6                                  | NA <sup>4</sup>         | 14                      | 0          | 14        | 3.7   | 0                | 0                            | 0                      | 0   | 14-Feb-15             |
| Brunei Darussalam                               | 4                            | 9.9                                  | 1                            | 2.4                                  | 0               | 0.0                                  | 0               | 0.0                                  | 0.4                                   | 6                       | 0                       | 0          | 0         | 0.0   | 0                | 6                            | 0                      | 0   | 24-Jul-12             |
| Cambodia  | 722                          | 50.5                                 | 0                            | 0.0                                  | 0               | 0.0                                  | 0               | 0.0                                  | 16.4                                  | 50                      | 0                       | 0          | 0         | 0.0   | 0                | 32                           | 18                     | 0   | 15-Nov-11             |
| China   | 9 943                        | 7.4                                  | 6 183                        | 4.6                                  | 26 912          | 19.8                                 | 48 123          | 35.3                                 | 1 396.0                               | 18 520                  | 6 634                   | 37         | 6 671     | 28.7  | 644              | 9 615                        | 1 590                  | 11  | 28-Feb-15             |
| China, Hong Kong SAR                            | 12                           | 1.7                                  | 8                            | 1.1                                  | 34              | 4.7                                  | 46              | 6.3                                  | 7.4                                   | 22                      | 1                       | 0          | 1         | 0.8   | 0                | 21                           | 0                      | 0   | 10-Feb-15             |
| China, Macao SAR                                | 1                            | 1.8                                  | 1                            | 1.8                                  | 3               | 5.2                                  | 1               | 1.7                                  | 0.6                                   | 1                       | 0                       | 0          | 0         | 0.0   | 0                | 1                            | 0                      | 0   | 3-Jun-14              |
| Japan   | 411                          | 3.2                                  | 228                          | 1.8                                  | 141             | 1.1                                  | 434             | 3.4                                  | 125.8                                 | 36                      | 2                       | 0          | 2         | 0.1   | 3                | 31                           | 0                      | 0   | 11-Feb-15             |
| Lao People's Democratic Republic                | 113                          | 18.0                                 | 36                           | 5.6                                  | 68              | 10.5                                 | 70              | 10.7                                 | 7.0                                   | 66                      | 0                       | 0          | 0         | 0.0   | 0                | 20                           | 46                     | 0   | 19-Nov-14             |
| Malaysia  | 1 603                        | 54.4                                 | 1 868                        | 63.7                                 | 177             | 5.9                                  | 213             | 7.0                                  | 30.0                                  | 527                     | 28                      | 0          | 28        | 5.6   | 1                | 323                          | 170                    | 0   | 23-Feb-15             |
| Mongolia  | 0                            | 0.0                                  | 0                            | 0.0                                  | 0               | 0.0                                  | 0               | 0.0                                  | 2.9                                   | 19                      | 0                       | 0          | 0         | 0.0   | 0                | 19                           | 0                      | 0   | 19-Jun-10             |
| New Zealand                                     | 599                          | 135.7                                | 55                           | 12.3                                 | 9               | 2.0                                  | 263             | 57.7                                 | 4.5                                   | 2                       | 0                       | 0          | 0         | 0.0   | 0                | 0                            | 2                      | 0   | 18-Nov-14             |
| Papua New Guinea                                | 0                            | 0.0                                  | 0                            | 0.0                                  | 7               | 1.0                                  | 2 589           | 345.9                                | 7.7                                   | 55                      | 27                      | 0          | 27        | 21.1  | 0                | 28                           | 0                      | 0   | 21-Jan-15             |
| Philippines                                     | 6 555                        | 69.1                                 | 1 536                        | 15.9                                 | 3 777           | 38.5                                 | 21 420          | 214.7                                | 101.7                                 | 561                     | 81                      | 12         | 93        | 5.5   | 169              | 109                          | 190                    | 1   | 8-Feb-15              |
| Republic of Korea                               | 43                           | 0.9                                  | 2                            | 0.0                                  | 107             | 2.2                                  | 442             | 9.0                                  | 49.2                                  | 75                      | 0                       | 0          | 0         | 0.0   | 0                | 70                           | 4                      | 0   | 12-Oct-14             |
| Singapore                                       | 143                          | 27.6                                 | 40                           | 7.6                                  | 56              | 10.6                                 | 134             | 25.1                                 | 5.1                                   | 11                      | 5                       | 0          | 5         | 5.9   | 0                | 5                            | 1                      | 0   | 24-Feb-15             |
| Viet Nam  | 745                          | 8.4                                  | 637                          | 5.9                                  | 895             | 9.9                                  | 6 498           | 71.0                                 | 93.6                                  | 185                     | 8                       | 0          | 8         | 0.5   | 1                | 86                           | 87                     | 0   | 24-Jan-15             |
| Pacific island countries and areas <sup>6</sup> | 2                            | 1.0                                  | 0                            | 0.0                                  | 0               | 0.0                                  | 268             | 81.9                                 | 3.3                                   | 17                      | 3                       | 0          | 3         | 5.5   | 0                | 13                           | 1                      | 0   | 22-Jan-15             |
| Western Pacific Region                          | 21 088                       | 11.7                                 | 10 794                       | 5.9                                  | 32 340          | 17.7                                 | 80 841          | 44.0                                 | 1 874.1                               | 20 153                  | 6 803                   | 49         | 6 852     | 21.9  | 818              | 10 379                       | 2 109                  | 12  |                       |

<sup>1</sup> Includes all cases reported to the Western Pacific Regional Office by 20 March 2015.

<sup>2</sup> Includes laboratory confirmed, epi-linked and clinically confirmed cases for 2009 to 2012.

<sup>3</sup> United Nations, Department of Economic and Social Affairs, Population Division World Population Prospects.

<sup>4</sup> Australia reports confirmed cases only.

<sup>5</sup> Excludes vaccine-associated cases

<sup>6</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, 2014–2015 <sup>1</sup>

| Country                            | 2014 <sup>1</sup>                          |  |   |  | 2015 <sup>1</sup>                                     |  |   |  |
|------------------------------------|--|--|---|--|---|--|---|--|
|                                    | Discarded non-measles rate per 100 000 pop | Second level units with ≥ 2 discarded cases per 100 000 pop (annualized) | Suspected cases with adequate investigation | Suspected cases with adequate blood specimens <sup>2</sup> | Annualized discarded non-measles rate per 100 000 pop | Second level units with ≥ 2 discarded cases per 100 000 pop (annualized) | Suspected cases with adequate investigation | Suspected cases with adequate blood specimens <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                  | 3.5  | 100.0%   | 93.8%                                       | 100.0%   | 8.1   | 100.0%   | 100.0%                                      | 100.0%   |
| Cambodia                           | 4.3  | 83.3%  | 68.9%                                       | 99.4%  | 1.2   | 16.7%  | 78.0%                                       | 100.0%   |
| China                              | 4.3  | 71.0%  | 91.0%                                       | 87.6%  | 4.1   | 41.9%  | 90.7%                                       | 79.5%  |
| China, Hong Kong SAR               | 2.1  | 100.0%   | 99.0%                                       | 92.8%  | 1.7   | 0.0%   | 100.0%                                      | 100.0%   |
| China, Macao SAR                   | 2.7  | 100.0%   | 100.0%                                      | 100.0%   | 1.1   | 0.0%   | 100.0%                                      | 100.0%   |
| Japan                              | 0.5  | 0.0%   | Insufficient data                           | Insufficient data  | 0.1   | 0.0%   | Insufficient data                           | Insufficient data  |
| Lao People's Democratic Republic   | 4.1  | 58.8%  | 74.5%                                       | 74.9%  | 1.7   | 11.8%  | 68.2%                                       | 68.2%  |
| Malaysia                           | 14.3                                       | 93.8%  | 73.2%                                       | 91.1%  | 6.5   | 75.0%  | 71.7%                                       | 60.2%  |
| Mongolia                           | 4.7  | 31.8%  | 100.0%                                      | 100.0%   | 4.0   | 13.6%  | 100.0%                                      | 100.0%   |
| New Zealand                        | 1.0  | Insufficient data  | Insufficient data                           | Insufficient data  | 0.0   | Insufficient data  | Insufficient data                           | Insufficient data  |
| Papua New Guinea                   | 27.6                                       | 75.0%  | 0.0%  | 63.5%  | 2.2   | 15.0%  | 5.5%  | 49.1%  |
| Philippines                        | 3.3  | 58.8%  | 52.5%                                       | 82.0%  | 0.6   | 5.9%   | 61.4%                                       | 68.3%  |
| Republic of Korea                  | 2.4  | 43.8%  | 95.6%                                       | 63.3%  | 0.9   | 75.0%  | 72.0%                                       | 78.7%  |
| Singapore                          | 1.6  | 0.0%   | 82.5%                                       | 25.3%  | 0.6   | 0.0%   | 90.9%                                       | 9.1%   |
| Viet Nam                           | 3.2  | 40.6%  | 43.5%                                       | 82.0%  | 0.6   | 4.7%   | 4.9%  | 9.2%   |
| Pacific island countries and areas | 3.8  | Insufficient data  | Insufficient data                           | Insufficient data  | 2.4   | Insufficient data  | 0.0%  | 82.4%  |
| Western Pacific Region             | 4.1  | 54.9%  | 20.3%                                       | 84.9%  | 3.3   | 19.5%  | 88.1%                                       | 78.0%  |

<sup>1</sup> Includes all cases reported to the Western Pacific Regional Office by 20 March 2015.

<sup>2</sup> Excludes epidemiologically-linked cases.

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

|        |  |
|--------|--|
| 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, 2014–2015 <sup>1</sup>

| Country   | 2014                            |   | 2015 <sup>1</sup>                     |                            |                         |            |       |   |                  |                              |                        |                             |
|---|---------------------------------|---|---------------------------------------|----------------------------|-------------------------|------------|-------|---|------------------|------------------------------|------------------------|-----------------------------|
|   | Total number of confirmed cases | Annualized rubella incidence per 1 million pop. | Population (in millions) <sup>2</sup> | Investigated rubella cases | Confirmed rubella cases |            |       | Annualized rubella incidence per 1 million pop. | Compatible cases | Discarded cases <sup>3</sup> | Pending classification | Congenital rubella syndrome |
|   |                                 |   |                                       |                            | Lab                     | Epi-linked | Total |   |                  |                              |                        |                             |
| Australia                                       | -                               | No data   | 22.61                                 | No data                    | -                       | -          | -     | No data   | -                | -                            | -                      | -                           |
| Brunei Darussalam                               | 0                               | 0.0   | 0.44                                  | 6                          | 0                       | 0          | 0     | 0.0   | 0                | 4                            | 0                      | -                           |
| Cambodia  | 30                              | 2.0   | 16.36                                 | 50                         | 0                       | 0          | 0     | 0.0   | 0                | 12                           | 10                     | -                           |
| China   | 11 887                          | 8.7   | 1 396.00                              | 18 520                     | -                       | -          | 1 468 | 6.3   | 0                | 0                            | 0                      | -                           |
| China, Hong Kong SAR                            | 1                               | 0.1   | 7.40                                  | 2                          | 1                       | 0          | 1     | 0.8   | 0                | 0                            | 1                      | -                           |
| China, Macao SAR                                | 0                               | 0.0   | 0.57                                  | 1                          | 0                       | 0          | 0     | 0.0   | 0                | 1                            | 0                      | -                           |
| Japan   | -                               | No data   | 125.79                                | No data                    | -                       | -          | -     | No data   | -                | -                            | -                      | -                           |
| Lao People's Democratic Republic                | 18                              | 2.8   | 7.03                                  | 21                         | 0                       | 0          | 0     | 0.0   | 0                | 19                           | 2                      | -                           |
| Malaysia  | 226                             | 7.5   | 30.04                                 | 218                        | 2                       | 0          | 2     | 0.4   | 0                | 42                           | 174                    | -                           |
| Mongolia  | 0                               | 0.0   | 2.85                                  | 19                         | 0                       | 0          | 0     | 0.0   | 0                | 19                           | 0                      | -                           |
| New Zealand                                     | -                               | No data   | 4.49                                  | No data                    | -                       | -          | -     | No data   | -                | -                            | -                      | -                           |
| Papua New Guinea                                | -                               | No data   | 7.68                                  | No data                    | -                       | -          | -     | No data   | -                | -                            | -                      | -                           |
| Philippines                                     | 237                             | 2.4   | 101.73                                | 561                        | 14                      | 0          | 14    | 0.8   | 0                | 357                          | 190                    | -                           |
| Republic of Korea                               | 2                               | 0.0   | 49.15                                 | 75                         | 1                       | 0          | 1     | 0.1   | 0                | 70                           | 4                      | -                           |
| Singapore                                       | 0                               | 0.0   | 5.06                                  | 3                          | 0                       | 0          | 0     | 0.0   | 0                | 2                            | 1                      | -                           |
| Viet Nam  | 33                              | 0.4   | 93.65                                 | 179                        | 57                      | 0          | 57    | 3.7   | 0                | 31                           | 91                     | -                           |
| Pacific island countries and areas <sup>4</sup> | 4                               | 1.2   | 3.26                                  | 17                         | 0                       | 0          | 0     | 0.0   | 0                | 17                           | 0                      | -                           |
| Western Pacific Region                          | 12 438                          | 6.8   | 1 874.11                              | 19 672                     | 75                      | 0          | 1 543 | 4.9   | 0                | 574                          | 473                    | 0                           |

<sup>1</sup> Includes all cases reported to the Western Pacific Regional Office by 20 March 2015.

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

<sup>3</sup> Excludes vaccine-associated cases

<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        |
| Gray   | No data   |

**Table 6A. Measles and rubella laboratory testing, WHO Western Pacific Region, 2014<sup>1</sup>**

| Country                          | Laboratory | Measles and rubella            |                 |                | Measles           |               |                      |                       |  |                       |   |                 |                                |                       |                                     |                                |               | Rubella       |            |            |            |
|----------------------------------|------------|--------------------------------|-----------------|----------------|-------------------|---------------|----------------------|-----------------------|--|-----------------------|---|-----------------|--------------------------------|-----------------------|-------------------------------------|--------------------------------|---------------|---------------|------------|------------|------------|
|                                  |            |                                |                 |                | Serology          |               |                      |                       |  |                       | Virus detection   |                 |                                |                       | Total number of lab confirmed cases | Serum and blood (includes DBS) |               |               |            |            |            |
|                                  |            | Serum                          |                 |                | Blood             |               | Timeliness of reults |                       | Measles Virus isolation/detection (swab, urine and others) |                       | Measles Reverse Transcription Polymerase Chain Reaction |                 | Samples tested for rubella IgM | Rubella IgM (+)       |                                     | Rubella IgM equiv              |               |               |            |            |            |
|                                  |            | Samples tested for measles IgM | Measles IgM (+) |                | Measles IgM equiv | DBS samples   |                      | ≤4 days <sup>2</sup>  | ≤7 days  | No. of samples tested |   | No. of isolates |                                | No. of samples tested |                                     |                                | No. (+)       | No.           | No.        | %          | No.        |
| No.                              | No.        | %                              | No.             | No. received   | No. (+)           | %             | %                    | No. of samples tested | No. of isolates  | No. of samples tested | No. (+)   | No.             | No.                            | %                     | No.                                 |                                |               |               |            |            |            |
| Australia                        | VIDRL      | 312                            | 312             | 226            | 66                | 42            | 63.6                 | 3                     | 0  | -                     | 100.0   | 100.0           | 0                              | -                     | 258                                 | 236                            | 207           | 24            | 0          | 0.0        | 0          |
| Brunei Darussalam                | DLS        | 51                             | 51              | 51             | 51                | 1             | 2.0                  | 0                     | 0  | -                     | 71.2  | 98.1            | 0                              | -                     | 0                                   | -                              | 1             | 52            | 2          | 3.8        | 0          |
| Cambodia                         | NIPH       | 635                            | 635             | 635            | 577               | 0             | 0.0                  | 0                     | 58   | 0                     | 98.6  | 100.0           | 0                              | -                     | 0                                   | -                              | 0             | 604           | 31         | 5.1        | 0          |
| China <sup>3</sup>               | CCDC       | NA                             | 105 219         | 105 167        | 105 219           | 45 751        | 43.5                 | NA                    | NA   | -                     | 81.0  | NA              | NA                             | 7 863                 | 0                                   | -                              | NA            | NA            | NA         | NA         | NA         |
| China, Hong Kong SAR             | PHLC       | 791                            | 791             | 665            | 698               | 34            | 4.9                  | 21                    | 0  | -                     | 93.6  | 98.9            | 39                             | 28                    | 204                                 | 58                             | 49            | 645           | 8          | 1.2        | 5          |
| China, Macao SAR                 | PHLC       | 58                             | 58              | 58             | 58                | 1             | 1.7                  | 0                     | 0  | -                     | 100.0   | 100.0           | 0                              | -                     | 1                                   | 1                              | 1             | 57            | 0          | 0.0        | 0          |
| Japan                            | NIID       | 2 396                          | 854             | 854            | 362               | 172           | 47.5                 | 15                    | 0  | -                     | No data   | No data         | 9                              | 9                     | 780                                 | 365                            | 190           | 11            | 2          | 18.2       | 0          |
| Lao People's Democratic Republic | NCLE       | 370                            | 370             | 369            | 370               | 74            | 20.0                 | 9                     | 0  | -                     | 92.6  | 99.7            | 0                              | -                     | 0                                   | -                              | 74            | 366           | 11         | 3.0        | 28         |
| Malaysia                         | NPHL       | 5 789                          | 5 789           | 5 134          | 4 751             | 257           | 5.4                  | 100                   | 0  | -                     | 67.5  | 90.2            | 997                            | 6                     | 0                                   | -                              | 261           | 4 434         | 220        | 5.0        | 87         |
| Mongolia                         | NCCD       | 138                            | 138             | 137            | 137               | 0             | 0.0                  | 0                     | 0  | -                     | 99.3  | 99.3            | 0                              | -                     | 0                                   | -                              | 0             | 137           | 1          | 0.7        | 1          |
| New Zealand                      | CHL        | 787                            | 787             | 704            | 249               | 45            | 18.1                 | 5                     | 0  | -                     | 98.6  | 99.0            | 15                             | 8                     | 519                                 | 162                            | 181           | 103           | 4          | 3.9        | 1          |
| Papua New Guinea                 | CPHL       | 4 595                          | 4 595           | 4 591          | 4 583             | 2 270         | 49.5                 | 316                   | 0  | -                     | 67.7  | 88.7            | 0                              | -                     | 37                                  | 32                             | 2 266         | 2 270         | 89         | 3.9        | 93         |
| Philippines                      | RITM       | 41 235                         | 19 297          | 19 151         | 18 766            | 12 736        | 67.9                 | 665                   | 364  | 187                   | 0.3   | 1.3             | 1 247                          | 444                   | 830                                 | 760                            | 13 431        | 5 870         | 235        | 4.0        | 104        |
| Republic of Korea                | KCDC       | 2 609                          | 2 609           | 1 873          | 1 324             | 270           | 20.4                 | 115                   | 0  | -                     | 75.1  | 89.7            | 332                            | 231                   | 1 440                               | 328                            | 469           | 770           | 28         | 3.6        | 39         |
| Singapore                        | SGH        | 675                            | 675             | 619            | 222               | 41            | 18.5                 | 13                    | 0  | -                     | 93.6  | 96.9            | 170                            | 6                     | 0                                   | -                              | 47            | 278           | 9          | 3.2        | 4          |
| Viet Nam (central)               | Nha Trang  | 1 800                          | 1 800           | 1 800          | 1 736             | 999           | 57.5                 | 30                    | 0  | -                     | 72.6  | 90.5            | 0                              | -                     | 99                                  | 50                             | 1 023         | 780           | 6          | 0.8        | 3          |
| Viet Nam (highland)              | IHE        | 483                            | 483             | 483            | 482               | 266           | 55.2                 | 3                     | 0  | -                     | 35.6  | 51.5            | 0                              | -                     | 0                                   | -                              | 266           | 425           | 1          | 0.2        | 0          |
| Viet Nam (northern)              | NIHE       | 4 804                          | 4 804           | 4 763          | 4 650             | 2 636         | 56.7                 | 261                   | 0  | -                     | 61.6  | 84.6            | 130                            | 5                     | 131                                 | 16                             | 2 648         | 2 196         | 18         | 0.8        | 21         |
| Viet Nam (southern)              | PI         | 12 684                         | 12 684          | 11 444         | 11 342            | 6 917         | 61.0                 | 142                   | 0  | -                     | 12.0  | 18.4            | 1 342                          | 134                   | 1 343                               | 16                             | 6 924         | 4 637         | 20         | 0.4        | 11         |
| Fiji                             | FCCDC      | 131                            | 131             | 131            | 112               | 0             | 0.0                  | 0                     | 19   | 1                     | 83.3  | 95.0            | 0                              | -                     | 0                                   | -                              | 1             | 128           | 3          | 2.3        | 0          |
| Vanuatu                          | FFCDC      | 13                             | 13              | 13             | 13                | 4             | 30.8                 | 2                     | 0  | -                     | 91.7  | 100.0           | 0                              | -                     | 0                                   | -                              | 4             | 13            | 1          | 7.7        | 3          |
| <b>Total</b>                     |            | <b>80 356</b>                  | <b>162 095</b>  | <b>158 868</b> | <b>155 768</b>    | <b>72 516</b> | <b>46. 6</b>         | <b>1 700</b>          | <b>441</b>   | <b>188</b>            | <b>31.3</b>   | <b>40.7</b>     | <b>4 281</b>                   | <b>8 734</b>          | <b>5 642</b>                        | <b>2 024</b>                   | <b>28 043</b> | <b>23 800</b> | <b>689</b> | <b>2.9</b> | <b>400</b> |

<sup>1</sup> Includes all cases reported to the Western Pacific Regional Office by 20 January 2015.

<sup>2</sup> Recommendation from the Fourth Meeting on Vaccine Preventable Diseases Laboratory Networks in the Western Pacific Region

<sup>3</sup> China Measles Surveillance System (MSS) and China Measles LabNet

NA - not available

**Table 6B. Measles and rubella laboratory testing, WHO Western Pacific Region, 2015<sup>1</sup>**

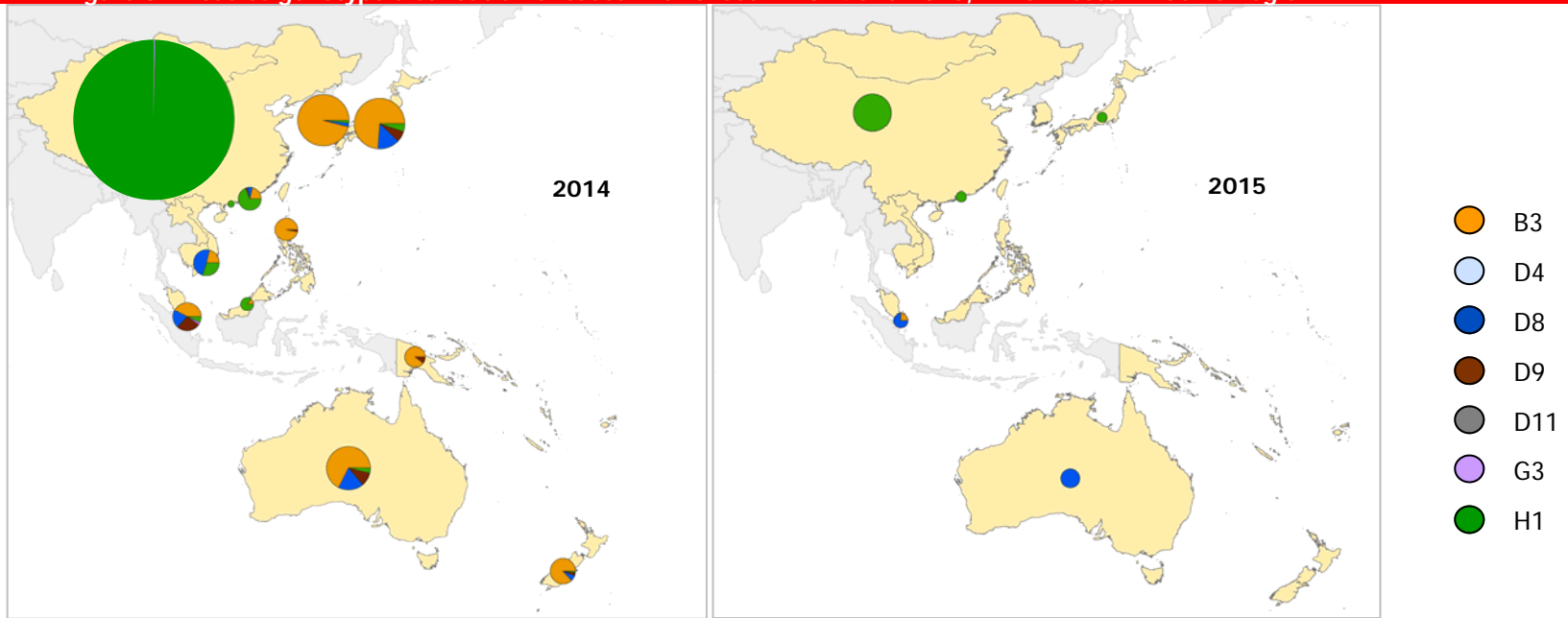
| Country                          | Laboratory | Measles and rubella              |                                |                              | Measles                        |                 |                   |             |              |                      |                      |  |                       |   |                       |                                     |                                | Rubella                        |            |                   |           |
|----------------------------------|------------|----------------------------------|--------------------------------|------------------------------|--------------------------------|-----------------|-------------------|-------------|--------------|----------------------|----------------------|--|-----------------------|---|-----------------------|-------------------------------------|--------------------------------|--------------------------------|------------|-------------------|-----------|
|                                  |            |                                  |                                |                              | Serology                       |                 |                   |             |              |                      | Virus detection      |  |                       |   |                       |                                     |                                | Serum and blood (includes DBS) |            |                   |           |
|                                  |            | Total number of samples received | Total number of samples tested | Total number of cases tested | Serum                          |                 |                   | Blood       |              | Timeliness of reults |                      | Measles Virus isolation/detection (swab, urine and others) |                       | Measles Reverse Transcription Polymerase Chain Reaction |                       | Total number of lab confirmed cases | Samples tested for rubella IgM | Rubella IgM (+)                |            | Rubella IgM equiv |           |
|                                  |            |                                  |                                |                              | Samples tested for measles IgM | Measles IgM (+) | Measles IgM equiv | DBS samples | No. received | No. (+)              | ≤4 days <sup>2</sup> | ≤7 days  | No. of samples tested | No. of isolates   | No. of samples tested |                                     |                                | No. (+)                        | No.        |                   | No.       |
| No.                              | No.        | %                                | No.                            | No.                          | No.                            | %               | %                 | No.         | No.          | No.                  | No.                  | No.  | No.                   | No.   | No.                   | %                                   | No.                            |                                |            |                   |           |
| Australia                        | VIDRL      | 26                               | 26                             | 15                           | 6                              | 5               | 83.3              | 0           | 0            | -                    | 100.0                | 100.0  | 0                     | -   | 20                    | 20                                  | 15                             | 0                              | -          | -                 | -         |
| Brunei Darussalam                | DLS        | 6                                | 6                              | 6                            | 6                              | 0               | 0.0               | 0           | 0            | -                    | 100.0                | 100.0  | 0                     | -   | 0                     | -                                   | 0                              | 6                              | 0          | 0.0               | 0         |
| Cambodia                         | NIPH       | 32                               | 32                             | 32                           | 21                             | 0               | 0.0               | 0           | 11           | 0                    | 100.0                | 100.0  | 0                     | -   | 0                     | -                                   | 0                              | 31                             | 1          | 3.2               | 0         |
| China <sup>3</sup>               | CCDC       |                                  |                                |                              |                                |                 |                   |             |              |                      | 91.3                 |  |                       |   |                       |                                     |                                |                                |            |                   |           |
| China, Hong Kong SAR             | PHLC       | 76                               | 76                             | 67                           | 70                             | 2               | 2.9               | 0           | 0            | -                    | 89.6                 | 98.5   | 0                     | -   | 7                     | 2                                   | 2                              | 66                             | 3          | 4.5               | 0         |
| China, Macao SAR                 | PHLC       | 7                                | 7                              | 7                            | 7                              | 0               | 0.0               | 2           | 0            | -                    | 100.0                | 100.0  | 0                     | -   | 0                     | -                                   | 0                              | 7                              | 0          | 0.0               | 0         |
| Japan                            | NIID       | 167                              | 145                            | 54                           | 19                             | 1               | 5.3               | 4           | 0            | -                    | No data              | No data  | 0                     | -   | 22                    | 1                                   | 2                              | 0                              | -          | -                 | -         |
| Lao People's Democratic Republic | NCLE       | 45                               | 45                             | 45                           | 45                             | 2               | 4.4               | 1           | 0            | -                    | 100.0                | 100.0  | 0                     | -   | 0                     | -                                   | 0                              | 44                             | 1          | 2.3               | 4         |
| Malaysia                         | NPHL       | 640                              | 640                            | 570                          | 538                            | 50              | 9.3               | 12          | 0            | -                    | 54.9                 | 65.3   | 0                     | -   | 0                     | -                                   | 50                             | 476                            | 10         | 2.1               | 9         |
| Mongolia                         | NCCD       | 19                               | 19                             | 19                           | 19                             | 0               | 0.0               | 0           | 0            | -                    | 100.0                | 100.0  | 0                     | -   | 0                     | -                                   | 0                              | 19                             | 0          | 0.0               | 0         |
| New Zealand                      | CHL        | 32                               | 32                             | 26                           | 14                             | 1               | 7.1               | 0           | 0            | -                    | 92.9                 | 92.9   | 0                     | -   | 15                    | 0                                   | 1                              | 9                              | 0          | 0.0               | 0         |
| Papua New Guinea                 | CPHL       | 81                               | 81                             | 81                           | 81                             | 31              | 38.3              | 9           | 0            | -                    | 45.7                 | 93.8   | 0                     | -   | 0                     | -                                   | 31                             | 0                              | -          | -                 | -         |
| Philippines                      | RITM       | 628                              | 628                            | 628                          | 612                            | 293             | 47.9              | 32          | 16           | 5                    | 53.9                 | 97.0   | 4                     | 1   | 1                     | 0                                   | 293                            | 314                            | 21         | 6.7               | 16        |
| Republic of Korea                | KCDC       | 172                              | 172                            | 118                          | 105                            | 2               | 1.9               | 4           | 0            | -                    | 98.6                 | 100.0  | 0                     | -   | 67                    | 1                                   | 2                              | 52                             | 1          | 1.9               | 2         |
| Singapore                        | SGH        | 79                               | 79                             | 72                           | 13                             | 0               | 0.0               | 0           | 0            | -                    | 100.0                | 100.0  | 17                    | 0   | 0                     | 0                                   | 0                              | 36                             | 1          | 2.8               | 0         |
| Viet Nam (central)               | Nha Trang  | 31                               | 31                             | 31                           | 31                             | 3               | 9.7               | 0           | 0            | -                    | 61.3                 | 90.3   | 0                     | -   | 0                     | -                                   | 3                              | 31                             | 3          | 9.7               | 2         |
| Viet Nam (highland)              | IHE        | 2                                | 2                              | 2                            | 2                              | 1               | 50.0              | 0           | 0            | -                    | 100.0                | 100.0  | 0                     | -   | 0                     | -                                   | 1                              | 2                              | 0          | 0.0               | 2         |
| Viet Nam (northern)              | NIHE       | 22                               | 22                             | 22                           | 22                             | 9               | 40.9              | 2           | 0            | -                    | 100.0                | 100.0  | 0                     | -   | 0                     | -                                   | 9                              | 17                             | 0          | 0.0               | 0         |
| Viet Nam (southern)              | PI         | 227                              | 227                            | 227                          | 227                            | 31              | 13.7              | 2           | 0            | -                    | 87.2                 | 95.2   | 32                    | 0   | 32                    | 0                                   | 31                             | 227                            | 108        | 47.6              | 2         |
| Fiji                             | FCCDC      | 10                               | 10                             | 10                           | 10                             | 0               | 0.0               | 0           | 0            | -                    | 100.0                | 100.0  | 0                     | -   | 0                     | -                                   | 0                              | 10                             | 0          | 0.0               | 0         |
| <b>Total</b>                     |            | <b>2 302</b>                     | <b>2 280</b>                   | <b>2 032</b>                 | <b>1 848</b>                   | <b>431</b>      | <b>23.3</b>       | <b>68</b>   | <b>27</b>    | <b>5</b>             | <b>67.9</b>          | <b>85.3</b>  | <b>53</b>             | <b>1</b>  | <b>164</b>            | <b>24</b>                           | <b>440</b>                     | <b>1 347</b>                   | <b>149</b> | <b>11.1</b>       | <b>37</b> |

<sup>1</sup> Includes all cases reported to the Western Pacific Regional Office by 20 March 2015

<sup>2</sup> Recommendation from the Fourth Meeting on Vaccine Preventable Diseases Laboratory Networks in the Western Pacific Region

<sup>3</sup> National measles laboratory report is not available

Figure 3. Measles genotype distribution of cases with onset in 2014 and 2015, WHO Western Pacific Region



The boundaries and names shown and the designations used on the maps do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.  
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\* Size of the pie chart is proportional to the number of genotypes reported by the country

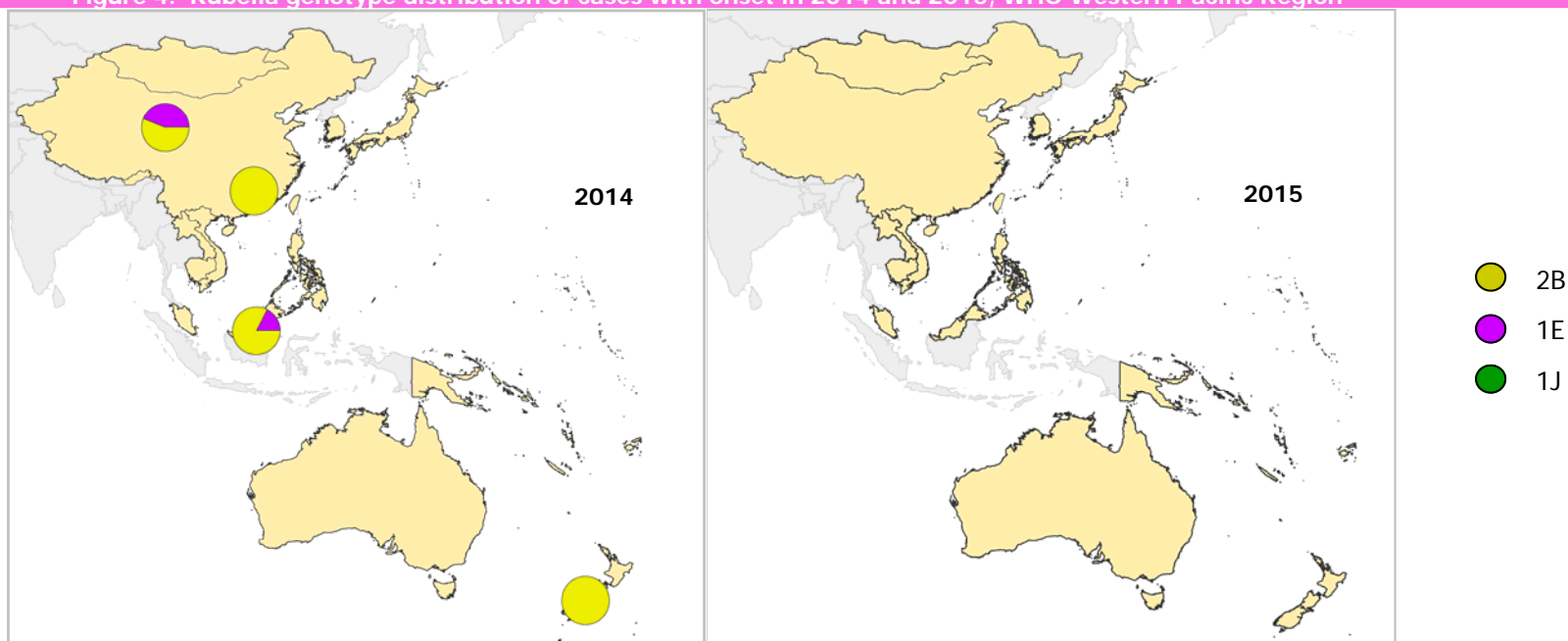
Table 7. Measles genotype distribution of cases with onset in March 2014 to February 2015, WHO Western Pacific Region

| Country   | 2014 |    |     |    |     |    |    |     |     |     |    |     |     |    |    |     |     |    |    |     | 2015 |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|------|----|-----|----|-----|----|----|-----|-----|-----|----|-----|-----|----|----|-----|-----|----|----|-----|------|----|----|-----|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|-----|-----|----|----|----|-----|----|----|--|--|---|---|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|   | Mar  |    |     |    | Apr |    |    |     | May |     |    |     | Jun |    |    |     | Jul |    |    |     | Aug  |    |    |     | Sep |    |    |    | Oct |    |    |    | Nov |    |    |    | Dec |    |    |     | Jan |    |    |    | Feb |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | B3   | D8 | D9  | H1 | B3  | D8 | D9 | G3  | 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                                       | 16   | 4  | 1   |    | 2   | 1  |    | 1   | 2   | 10  | 3  | 5   |     | 14 | 7  | 1   | 1   | 9  | 4  | 1   | 3    | 2  | 9  |     | 1   | 1  |    |    |     | 2  | 2  | 4  |     |    |    |    |     |    |    |     |     |    |    |    |     | 10 |    |  |  |   |   |  |  | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Brunei Darussalam                               |      |    |     |    |     |    |    |     |     |     |    |     |     |    |    |     |     |    |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cambodia  |      |    |     |    |     |    |    |     |     |     |    |     |     |    |    |     |     |    |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| China   | 3    | 2  | 888 | 1  | 1   |    |    | 932 |     | 1   | 1  | 728 |     |    | 3  | 576 |     |    | 1  | 301 |      |    |    | 188 |     |    | 84 |    |     |    | 74 |    |     |    | 48 |    |     |    |    | 100 |     |    |    |    |     |    | 91 |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hong Kong (China)                               | 3    | 1  |     | 3  | 1   |    |    | 2   |     |     |    | 4   |     | 2  |    | 2   |     |    |    | 6   |      |    |    | 3   |     |    | 3  | 1  |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Macao (China)                                   |      |    |     |    |     |    |    |     |     |     |    |     |     |    |    | 1   |     |    |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Japan   | 64   | 7  | 10  | 3  | 35  | 1  | 8  |     | 1   | 14  | 12 |     | 4   | 13 | 7  |     | 1   | 5  |    |     |      |    | 5  | 3   |     |    |    |    |     |    |    |    |     | 3  |    |    |     | 1  |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lao People's Democratic Republic                |      |    |     |    |     |    |    |     |     |     |    |     |     |    |    |     |     |    |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Malaysia  |      |    |     | 5  |     |    |    |     | 1   |     |    |     |     |    |    |     |     | 1  |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mongolia  |      |    |     |    |     |    |    |     |     |     |    |     |     |    |    |     |     |    |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| New Zealand                                     | 5    |    | 2   |    | 6   |    |    |     |     | 6   |    |     |     | 6  |    |     |     | 3  | 1  |     |      |    |    |     |     | 1  |    |    |     |    | 1  |    |     |    |    |    |     | 2  |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Papua New Guinea                                | 10   |    |     |    | 12  |    | 1  |     |     | 4   |    |     |     |    |    |     |     |    |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Philippines                                     | 6    |    |     |    |     |    |    |     |     |     |    |     |     |    |    |     |     |    |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Republic of Korea                               | 27   | 1  |     |    | 60  | 2  |    |     | 2   | 114 | 4  |     |     | 63 |    | 2   | 29  |    |    | 2   | 2    |    |    |     |     | 1  |    |    |     | 1  |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Singapore                                       | 3    | 2  | 8   |    | 1   | 4  | 1  |     | 2   | 2   |    | 1   | 1   |    |    |     |     | 4  |    | 1   | 1    | 1  | 1  | 3   | 1   |    |    |    |     |    |    |    |     |    |    |    |     | 1  |    |     |     | 1  |    |    |     |    |    |  |  | 1 | 2 |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Viet Nam  | 12   | 11 |     | 1  |     |    |    |     |     |     |    |     |     |    |    |     |     |    |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pacific island countries and areas <sup>4</sup> |      |    |     |    |     |    |    |     |     |     |    |     |     |    |    |     |     |    |    |     |      |    |    |     |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |     |     |    |    |    |     |    |    |  |  |   |   |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Sources: Includes all cases reported to the Western Pacific Regional Office by 20 March 2015 and the Measles Nucleotide Sequence online database (MeANS).



Figure 4. Rubella genotype distribution of cases with onset in 2014 and 2015, WHO Western Pacific Region



The boundaries and names shown and the designations used on the maps do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.  
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\* Size of the pie chart is proportional to the number of genotypes reported by the country

Table 8. Rubella genotype distribution of cases with onset in March 2014 to February 2015, WHO Western Pacific Region

| Country   | 2014 |    |    |     |    |    |     |    |    |     |    |    | 2015 |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
|---|------|----|----|-----|----|----|-----|----|----|-----|----|----|------|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|--|--|
|   | Mar  |    |    | Apr |    |    | May |    |    | Jun |    |    | Jul  |    |    | Aug |    |    | Sep |    |    | Oct |    |    | Nov |    |    | Dec |    |    | Jan |    |    | Feb |  |  |
|   | 2B   | 1E | 1J | 2B  | 1E | 1J | 2B  | 1E | 1J | 2B  | 1E | 1J | 2B   | 1E | 1J | 2B  | 1E | 1J | 2B  | 1E | 1J | 2B  | 1E | 1J | 2B  | 1E | 1J | 2B  | 1E | 1J | 2B  | 1E | 1J |     |  |  |
| Australia                                       |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Brunei Darussalam                               |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Cambodia  |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| China   | 10   | 17 |    | 15  | 10 |    | 24  | 7  |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Hong Kong (China)                               |      |    |    |     |    | 1  |     |    |    |     |    | 1  |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Macao (China)                                   |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Japan   |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Lao People's Democratic Republic                |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Malaysia  | 5    | 1  |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Mongolia  |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| New Zealand                                     |      |    |    |     |    |    |     |    | 1  |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Papua New Guinea                                |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Philippines                                     |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Republic of Korea                               |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Singapore                                       |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Viet Nam  |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |
| Pacific island countries and areas <sup>4</sup> |      |    |    |     |    |    |     |    |    |     |    |    |      |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |     |  |  |

Sources: Includes all cases reported to the Western Pacific Regional Office by 20 March 2015

**Table 9A. Completeness and timeliness of epidemiologic reporting, WHO Western Pacific Region, 2013–2015**

| Country                            | 2013         |            | 2014         |            | 2015 <sup>1</sup> |        | Completeness <sup>2</sup> | Timeliness <sup>3</sup> |
|------------------------------------|--------------|------------|--------------|------------|-------------------|--------|---------------------------|-------------------------|
|                                    | Completeness | Timeliness | Completeness | Timeliness | Jan               | Feb    |                           |                         |
|                                    |              |            |              |            | 10 Feb            | 10 Mar |                           |                         |
| Australia                          | 100%         | 100%       | 100%         | 92%        | 09 Feb            | 06 Mar | 100%                      | 100%                    |
| Brunei Darussalam                  | 100%         | 100%       | 100%         | 100%       | 07 Feb            | 09 Mar | 100%                      | 100%                    |
| Cambodia                           | 100%         | 100%       | 100%         | 100%       | 10 Feb            | 10 Mar | 100%                      | 100%                    |
| China                              | 100%         | 83%        | 100%         | 67%        | 25 Feb            | 15 Mar | 100%                      | 50%                     |
| China, Hong Kong SAR               | 100%         | 100%       | 100%         | 100%       | 10 Feb            | 10 Mar | 100%                      | 100%                    |
| China, Macao SAR                   | 100%         | 100%       | 100%         | 100%       | 04 Feb            | 10 Mar | 100%                      | 100%                    |
| Japan                              | 100%         | 83%        | 100%         | 17%        | 07 Feb            | 10 Mar | 100%                      | 100%                    |
| Lao People's Democratic Republic   | 100%         | 100%       | 100%         | 100%       | 10 Feb            | 10 Mar | 100%                      | 100%                    |
| Malaysia                           | 100%         | 100%       | 100%         | 92%        | 09 Feb            | 10 Mar | 100%                      | 100%                    |
| Mongolia                           | 100%         | 100%       | 100%         | 100%       | 10 Feb            | 09 Mar | 100%                      | 100%                    |
| New Zealand                        | 100%         | 92%        | 100%         | 100%       | 03 Feb            | 03 Mar | 100%                      | 100%                    |
| Papua New Guinea                   | 100%         | 92%        | 92%          | 58%        | 10 Feb            | 11 Mar | 100%                      | 50%                     |
| Philippines                        | 100%         | 100%       | 100%         | 100%       | 06 Feb            | 09 Mar | 100%                      | 100%                    |
| Republic of Korea                  | 100%         | 100%       | 100%         | 100%       | 04 Feb            | 06 Mar | 100%                      | 100%                    |
| Singapore                          | 100%         | 100%       | 100%         | 92%        | 10 Feb            | 04 Mar | 100%                      | 100%                    |
| Viet Nam                           | 100%         | 100%       | 100%         | 100%       | 10 Feb            | 03 Mar | 100%                      | 100%                    |
| Pacific island countries and areas | 100%         | 100%       | 100%         | 100%       | 04 Feb            | 05 Mar | 100%                      | 100%                    |
| Completeness                       | 100%         |            | 100%         |            | 100%              | 100%   | 100%                      |                         |
| Timeliness                         |              | 97%        |              | 90%        | 94%               | 94%    |                           | 94%                     |

<sup>1</sup> National measles surveillance monthly reports from February 2015.

Legend: black = timely report; red = untimely report

<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> Countries and areas should submit reports by the 10th (or the next working 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 following month.

**Table 9B. Completeness and timeliness of laboratory reporting, WHO Western Pacific Region, 2013–2015**

| Country                          | 2013         |            | 2014         |            | 2015 <sup>1</sup> |        |                           |                         |
|----------------------------------|--------------|------------|--------------|------------|-------------------|--------|---------------------------|-------------------------|
|                                  | Completeness | Timeliness | Completeness | Timeliness | Jan               | Feb    | Completeness <sup>3</sup> | Timeliness <sup>4</sup> |
|                                  |              |            |              |            | 10 Feb            | 10 Mar |                           |                         |
| Australia                        | 100%         | 100%       | 100%         | 100%       | 05 Feb            | 02 Mar | 100%                      | 100%                    |
| Brunei Darussalam                | 100%         | 78%        | 100%         | 100%       | 07 Feb            | 28 Feb | 100%                      | 100%                    |
| Cambodia                         | 100%         | 100%       | 100%         | 100%       | 10 Feb            | 10 Mar | 100%                      | 100%                    |
| China                            | 100%         | 100%       | 100%         | 100%       | 02 Feb            | 02 Mar | 100%                      | 100%                    |
| China, Hong Kong SAR             | 100%         | 100%       | 100%         | 100%       | 06 Feb            | 06 Mar | 100%                      | 100%                    |
| China, Macao SAR                 | 100%         | 100%       | 100%         | 100%       | 04 Feb            | 10 Mar | 100%                      | 100%                    |
| Japan                            | 100%         | 100%       | 100%         | 42%        | 07 Feb            | 10 Mar | 100%                      | 100%                    |
| Lao People's Democratic Republic | 92%          | 92%        | 100%         | 100%       | 10 Feb            | 10 Mar | 100%                      | 100%                    |
| Malaysia                         | 100%         | 100%       | 100%         | 83%        | 09 Feb            | 10 Mar | 100%                      | 100%                    |
| Mongolia                         | 100%         | 100%       | 100%         | 100%       | 09 Feb            | 05 Mar | 100%                      | 100%                    |
| New Zealand                      | 100%         | 100%       | 100%         | 100%       | 09 Feb            | 09 Mar | 100%                      | 100%                    |
| Papua New Guinea                 | 83%          | 83%        | 100%         | 92%        | 11 Feb            | 17 Mar | 100%                      | 0%                      |
| Philippines                      | 100%         | 100%       | 100%         | 92%        | 10 Feb            | 09 Mar | 100%                      | 100%                    |
| Republic of Korea                | 100%         | 100%       | 100%         | 100%       | 09 Feb            | 09 Mar | 100%                      | 100%                    |
| Singapore                        | 100%         | 100%       | 100%         | 100%       | 09 Feb            | 07 Mar | 100%                      | 100%                    |
| Viet Nam (central)               |              |            | 82%          | 73%        | 11 Feb            | 16 Mar | 100%                      | 0%                      |
| Viet Nam (highlands)             |              |            | 91%          | 82%        | 11 Feb            | 16 Mar | 100%                      | 0%                      |
| Viet Nam (northern)              | 100%         | 50%        | 100%         | 83%        | 11 Feb            | 16 Mar | 100%                      | 0%                      |
| Viet Nam (southern)              | 100%         | 67%        | 100%         | 100%       | 09 Feb            | 10 Mar | 100%                      | 100%                    |
| Fiji                             | 100%         | 100%       | 100%         | 100%       | 04 Feb            | 05 Mar | 100%                      | 100%                    |
| Completeness                     | 99%          |            | 99%          |            | 100%              | 100%   | 100%                      |                         |
| Timeliness                       |              | 92%        |              | 92%        | 89%               | 80%    |                           | 80%                     |

<sup>1</sup> National measles laboratory monthly reports from February 2015.

Legend: black = timely report; red = untimely report

<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.

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