

# MEASLES-RUBELLA

This issue of the Measles-Rubella Bulletin includes data on cases with rash onset in 2012 through October that were reported to the Regional Office in November. Detailed explanations of the indicators used in this Bulletin may be found in [Measles Bulletin Vol. 1 Issue 13 \(September 2007\)](#) and [Measles Bulletin Vol. 2 Issue 4 \(December 2008\)](#). These indicators are consistent with those recommended in the [Weekly Epidemiological Record, No. 49, 2010, 85: 489–496](#).

**Table 1A. Completeness and timeliness of epidemiologic reporting, WHO Western Pacific Region, 2010–2012**

Country	2010		2011		2012 <sup>1</sup>										Completeness <sup>2</sup>	Timeliness <sup>3</sup>
	Completeness	Timeliness	Completeness	Timeliness	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		
Australia	100%	100%	100%	100%	02 Feb	08 Mar	04 Apr	08 May	05 Jun	09 Jul	03 Aug	07 Sep	05 Oct	05 Nov	100%	100%
Brunei Darussalam	100%	100%	100%	100%	08 Feb	07 Mar	04 Apr	08 May	09 Jun	09 Jul	04 Aug	08 Sep	08 Oct	08 Nov	100%	100%
Cambodia	75%	42%	100%	92%	10 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	10 Sep	10 Oct	10 Nov	100%	100%
China	100%	58%	100%	100%	15 Feb	20 Mar	10 Apr	15 May	11 Jun	15 Jul	14 Aug	19 Sep	15 Oct	14 Nov	100%	80%
Hong Kong (China)	100%	100%	100%	100%	06 Feb	02 Mar	05 Apr	09 May	04 Jun	10 Jul	10 Aug	10 Sep	09 Oct	08 Nov	100%	100%
Macao (China)	100%	100%	100%	100%	07 Feb	08 Mar	02 Apr	04 May	07 Jun	05 Jul	07 Aug	05 Sep	08 Oct	06 Nov	100%	100%
Japan	100%	100%	100%	100%	07 Feb	02 Mar	10 Apr	09 May	10 Jun	05 Jul	07 Aug	10 Sep	10 Oct	08 Nov	100%	100%
Lao People's Democratic Republic	83%	75%	92%	92%	15 Feb	10 Mar	18 Apr	11 May	10 Jun	09 Jul	10 Aug	06 Sep	08 Oct	09 Nov	100%	70%
Malaysia	92%	83%	100%	92%	10 Feb	07 Mar	06 Apr	10 May	08 Jun	11 Jul	10 Aug	10 Sep	06 Oct	08 Nov	100%	90%
Mongolia	100%	92%	100%	100%	08 Feb	10 Mar	09 Apr	09 May	08 Jun	09 Jul	09 Aug	08 Sep	08 Oct	07 Nov	100%	100%
New Zealand	100%	92%	100%	83%	07 Feb	06 Mar	04 Apr	10 May	08 Jun	09 Jul	03 Aug	07 Sep	09 Oct	07 Nov	100%	100%
Papua New Guinea	67%	33%	75%	42%			17 Apr	04 May	12 Jun	13 Jul	10 Aug	10 Sep	10 Oct	13 Nov	80%	40%
Philippines	100%	92%	100%	92%	07 Feb	03 Mar	31 Mar	07 May	10 Jun	06 Jul	04 Aug	09 Sep	10 Oct	10 Nov	100%	100%
Republic of Korea	92%	92%	100%	92%	07 Feb	06 Mar	09 Apr	07 May	07 Jun	10 Jul	02 Aug	10 Sep	08 Oct	07 Nov	100%	100%
Singapore	100%	100%	100%	92%	03 Feb	07 Mar	09 Apr	04 May	06 Jun	07 Jul	08 Aug	04 Sep	04 Oct	07 Nov	100%	100%
Viet Nam	92%	25%	75%	50%	01 Mar	01 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	10 Sep	10 Oct	10 Nov	100%	90%
Pacific island countries and areas	92%	58%	75%	67%	04 Feb	10 Mar	03 Apr	07 May	04 Jun	03 Jul	01 Aug	05 Sep	09 Oct	09 Nov	100%	100%
Completeness	94%		95%		94%	94%	100%	100%	100%	100%	100%	100%	100%	100%	99%	
Timeliness		79%		89%	82%	88%	88%	94%	94%	88%	100%	94%	100%	94%		92%

<sup>1</sup> National measles surveillance monthly reports from January to October 2012.

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 1B. Completeness and timeliness of laboratory reporting, WHO Western Pacific Region, 2010–2012**

Country	2010		2011		2012 <sup>1</sup>										Completeness <sup>2</sup>	Timeliness <sup>3</sup>
	Completeness	Timeliness	Completeness	Timeliness	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		
Australia	100%	100%	100%	100%	09 Feb	06 Mar	03 Apr	02 May	05 Jun	04 Jul	01 Aug	04 Sep	02 Oct	02 Nov	100%	100%
Cambodia	42%	25%	100%	100%	06 Feb	08 Mar	08 Apr	10 May	06 Jun	05 Jul	09 Aug	07 Sep	09 Oct	08 Nov	100%	100%
China	0%	0%	0%	0%											0%	0%
Hong Kong (China)	100%	100%	100%	100%	08 Feb	10 Mar	10 Apr	10 May	08 Jun	10 Jul	08 Aug	07 Sep	09 Oct	08 Nov	100%	100%
Macao (China)	100%	100%	100%	100%	07 Feb	09 Mar	05 Apr	04 May	07 Jun	05 Jul	07 Aug	07 Sep	08 Oct	07 Nov	100%	100%
Japan	0%	0%	100%	100%	07 Feb	02 Mar	10 Apr	09 May	10 Jun	05 Jul	07 Aug	10 Sep	10 Oct	08 Nov	100%	100%
Lao People's Democratic Republic	58%	58%	100%	100%	10 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	12 Sep	10 Oct	10 Nov	100%	90%
Malaysia	92%	58%	100%	100%	13 Feb	11 Mar	10 Apr	09 May	10 Jun	12 Jul	10 Aug	11 Sep	10 Oct	10 Nov	100%	60%
Mongolia	100%	100%	100%	100%	08 Feb	07 Mar	06 Apr	08 May	06 Jun	06 Jul	07 Aug	07 Sep	08 Oct	05 Nov	100%	100%
New Zealand	100%	33%	100%	92%	09 Feb	09 Mar	10 Apr	10 May	08 Jun	09 Jul	10 Aug	07 Sep	10 Oct	08 Nov	100%	100%
Papua New Guinea	75%	33%	83%	67%	13 Feb	08 Mar		10 May	08 Jun	12 Jul	09 Aug	12 Sep	10 Oct	10 Nov	90%	60%
Philippines	100%	83%	100%	100%	10 Feb	08 Mar	10 Apr	09 May	08 Jun	09 Jul	10 Aug	07 Sep	11 Oct	08 Nov	100%	90%
Republic of Korea	100%	100%	100%	100%	07 Feb	10 Mar	10 Apr	10 May	08 Jun	10 Jul	10 Aug	10 Sep	10 Oct	05 Nov	100%	100%
Singapore	100%	100%	100%	100%	10 Feb	10 Mar	09 Apr	10 May	08 Jun	09 Jul	10 Aug	10 Sep	08 Oct	09 Nov	100%	100%
Viet Nam (northern)	100%	58%	100%	75%	10 Feb	10 Mar	03 Apr	04 May	09 Jun	10 Jul	09 Aug	11 Sep	06 Oct	09 Nov	100%	90%
Viet Nam (southern)	83%	50%	100%	100%	10 Feb	08 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	10 Sep	10 Oct	10 Nov	90%	90%
Fiji	67%	50%	92%	58%	04 Feb	10 Mar	03 Apr	07 May	04 Jun	03 Jul	01 Aug	05 Sep	09 Oct	09 Nov	100%	100%
Completeness	77%		93%		94%	94%	88%	94%	94%	88%	94%	94%	94%	94%	93%	
Timeliness		62%		88%	82%	88%	88%	94%	94%	76%	94%	71%	88%	94%		87%

<sup>1</sup> National measles laboratory monthly reports from January to October 2012.

<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.

Table 2A. Measles case classification and incidence by country and area, WHO Western Pacific Region, 2011–2012<sup>1</sup>

Country	2011										2012 <sup>1</sup>									
	Population (in millions) <sup>2</sup>	Suspected measles cases <sup>3</sup>	Confirmed measles cases				Discarded cases	Pending classification	Deaths due to measles	Measles incidence per 1 million pop.	Population (in millions) <sup>2</sup>	Suspected measles cases <sup>3</sup>	Confirmed measles cases				Discarded cases	Pending classification	Deaths due to measles	Annualized Measles incidence per 1 million pop.
			Lab	Epi-linked	Clinical	Total							Lab	Epi-linked	Clinical	Total				
Australia	22.61	No data	166	26	No data	192	0	0	0	8.5	22.92	No data	166	21	No data	187	No data	0	0	9.8
Brunei Darussalam	0.41	10	4	0	0	4	6	0	0	9.9	0.41	6	1	0	0	1	5	0	0	3
Cambodia	14.31	3 611	320	0	402	722	2 889	0	1	50.5	14.48	961	0	0	0	0	952	9	0	0
China	1 347.57	34 642	8 951	13	979	9 943	24 692	7	10	7.4	1 353.60	31 510	4 717	6	89	4 812	26 574	124	6	4.3
Hong Kong (China)	7.12	231	6	1	5	12	219	0	0	1.7	7.20	151	3	0	3	6	145	0	0	1.0
Macao (China)	0.56	16	1	0	0	1	15	0	0	1.8	0.57	18	1	0	0	1	17	0	0	2.1
Japan	126.50	809	322	9	79	410	399	0	0	3.2	126.43	383	181	2	41	224	159	0	0	2.1
Lao People's Democratic Republic	6.29	439	12	17	84	113	326	0	0	18.0	6.37	456	1	0	4	5	446	5	0	0.9
Malaysia	28.86	4 910	1 445	82	42	1 569	3 341	0	4	54.4	29.32	7 340	1 546	43	341	1 930	4 803	607	0	79.0
Mongolia	2.80	183	0	0	0	0	183	0	0	0	2.84	586	0	0	0	0	586	0	0	0
New Zealand	4.41	No data	428	105	66	599	0	3	0	135.7	4.46	74	46	3	0	49	15	10	0	13.2
Papua New Guinea	7.01	50	0	0	0	0	44	6	0	0	7.17	33	0	0	0	0	0	33	0	0
Philippines	94.85	9 512	3 240	171	3 144	6 555	2 954	3	28	69.1	96.47	3 095	568	19	759	1 346	1 637	112	8	16.7
Republic of Korea	48.39	174	40	0	3	43	131	0	0	0.9	48.59	104	2	0	0	2	98	4	0	0
Singapore	5.19	No data	143	No data	No data	143	0	0	0	27.6	5.26	52	28	2	3	33	19	0	0	7.5
Viet Nam	88.79	14 954	22	81	642	745	14 208	0	4	8.4	89.73	1 021	5	0	408	413	537	71	0	5.5
<b>Pacific island countries and areas</b>																				
American Samoa	0.07	0	0	0	0	0	0	0	0	0	0.07	0	0	0	0	0	0	0	0	0
Cook Islands	0.02	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0	0	0	0
Fiji <sup>4</sup>	0.87	538	2	0	0	2	538	1	0	2.3	0.88	167	0	0	0	0	165	2	0	0
French Polynesia	0.27	0	0	0	0	0	0	0	0	0	0.28	0	0	0	0	0	0	0	0	0
Guam	0.18	0	0	0	0	0	0	0	0	0	0.18	0	0	0	0	0	0	0	0	0
Kiribati	0.10	0	0	0	0	0	0	0	0	0	0.10	0	0	0	0	0	0	0	0	0
Marshall Islands	0.05	0	0	0	0	0	0	0	0	0	0.06	0	0	0	0	0	0	0	0	0
Micronesia, Federated States of	0.11	0	0	0	0	0	0	0	0	0	0.11	0	0	0	0	0	0	0	0	0
Nauru	0.01	0	0	0	0	0	0	0	0	0	0.01	0	0	0	0	0	0	0	0	0
New Caledonia	0.25	0	0	0	0	0	0	0	0	0	0.26	0	0	0	0	0	0	0	0	0
Niue	0.00	0	0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	0	0	0
Northern Mariana Islands	0.06	0	0	0	0	0	0	0	0	0	0.06	0	0	0	0	0	0	0	0	0
Palau	0.02	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0	0	0	0
Samoa	0.18	0	0	0	0	0	0	0	0	0	0.18	0	0	0	0	0	0	0	0	0
Solomon Islands	0.55	0	0	0	0	0	0	0	0	0	0.57	0	0	0	0	0	0	0	0	0
Tokelau	0.00	0	0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	0	0	0
Tonga	0.10	0	0	0	0	0	0	0	0	0	0.10	0	0	0	0	0	0	0	0	0
Tuvalu	0.01	0	0	0	0	0	0	0	0	0	0.01	0	0	0	0	0	0	0	0	0
Vanuatu	0.25	0	0	0	0	0	0	0	0	0	0.25	0	0	0	0	0	0	0	0	0
Wallis and Futuna	0.01	0	0	0	0	0	0	0	0	0	0.01	0	0	0	0	0	0	0	0	0
<b>Western Pacific Region</b>	<b>1 808.80</b>	<b>70 079</b>	<b>15 102</b>	<b>505</b>	<b>5 446</b>	<b>21 053</b>	<b>49 945</b>	<b>20</b>	<b>47</b>	<b>11.6</b>	<b>1 819.01</b>	<b>45 957</b>	<b>7 265</b>	<b>96</b>	<b>1 648</b>	<b>9 009</b>	<b>36 158</b>	<b>977</b>	<b>14</b>	<b>5.9</b>

<sup>1</sup> National measles surveillance monthly reports from January to October 2012.

<sup>2</sup> Population figures from United Nations World Population Prospects: The 2010 Revision.

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

Table 2B. Measles surveillance performance indicators by country and area, WHO Western Pacific Region, 2011–2012 <sup>1</sup>

Country	2011					2012 <sup>1</sup>				
	Discarded non-measles rate per 100 000 pop	Second level units with ≥ 1 discarded cases per 100 000 pop (annualized)	Suspected cases with adequate investigation	Suspected cases with adequate blood specimens <sup>2</sup>	Percent clinically confirmed cases <sup>3</sup>	Annualized discarded non-measles rate per 100 000 pop	Second level units with ≥ 1 discarded cases per 100 000 pop (annualized)	Suspected cases with adequate investigation	Suspected cases with adequate blood specimens <sup>2</sup>	Percent clinically confirmed cases <sup>3</sup>
	≥ 2	≥ 80%	≥ 80%	≥ 80%	≤ 10%	≥ 2	≥ 80%	≥ 80%	≥ 80%	≤ 10%
Australia <sup>4</sup>	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data
Brunei Darussalam	1.5	100.0%	60.0%	90.0%	0%	1.5	100.0%	66.7%	83.3%	0%
Cambodia	20.2	75.0%	28.5%	91.8%	55.7%	7.9	41.7%	55.4%	97.4%	0%
China	1.8	71.0%	97.2%	90.6%	9.8%	2.4	74.2%	98.9%	95.5%	1.8%
Hong Kong (China)	3.1	100.0%	98.2%	99.1%	41.7%	2.4	100.0%	94.6%	99.3%	50.0%
Macao (China)	2.7	100.0%	100.0%	100.0%	0%	3.6	100.0%	94.4%	100.0%	0%
Japan	0.3	4.3%	Insufficient data	Insufficient data	19.3%	0.2	0%	Insufficient data	Insufficient data	18.3%
Lao People's Democratic Republic	5.2	70.6%	29.3%	53.8%	74.3%	8.4	70.6%	49.1%	75.0%	80.0%
Malaysia	11.6	93.8%	46.2%	84.5%	2.7%	19.7	100.0%	75.9%	90.3%	17.7%
Mongolia	6.5	36.4%	59.6%	100.0%	0%	24.7	45.5%	67.4%	100.0%	0%
New Zealand <sup>4</sup>	Insufficient data	Insufficient data	Insufficient data	Insufficient data	11.0%	Insufficient data	Insufficient data	Insufficient data	Insufficient data	0%
Papua New Guinea	0.6	20.0%	40.0%	82.0%	0%	0	0%	78.8%	84.8%	0%
Philippines	3.1	88.2%	88.6%	98.0%	48.0%	2.0	64.7%	78.0%	97.8%	56.4%
Republic of Korea	0.3	0%	64.3%	87.1%	7.0%	0.2	6.3%	84.6%	91.3%	0%
Singapore <sup>4</sup>	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data
Viet Nam	16.0	84.4%	20.0%	33.3%	86.2%	0.7	25.0%	78.5%	92.2%	98.8%
<b>Pacific island countries and areas</b>										
American Samoa	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Cook Islands	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Fiji	62.0	100%	0.0%	Not applicable	Not applicable	22.6	Insufficient data	0%	Insufficient data	0%
French Polynesia	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Guam	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Kiribati	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Marshall Islands	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Micronesia, Federated States of	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Nauru	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
New Caledonia	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Niue	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Northern Mariana Islands	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Palau	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Samoa	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Solomon Islands	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Tokelau	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Tonga	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Tuvalu	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Vanuatu	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
Wallis and Futuna	0	0%	Not applicable	Not applicable	Not applicable	0	0%	Not applicable	Not applicable	Not applicable
<b>Western Pacific Region</b>	<b>2.8</b>	<b>52.3%</b>	<b>70.4%</b>	<b>77.8%</b>	<b>26.3%</b>	<b>2.4</b>	<b>34.0%</b>	<b>91.5%</b>	<b>94.6%</b>	<b>18.8%</b>

<sup>1</sup> National measles surveillance monthly reports from January to October 2012.

<sup>2</sup> Excludes epidemiologically-linked and clinically confirmed cases.

<sup>3</sup> Among all confirmed cases.

<sup>4</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 3A. Measles and rubella laboratory performance, WHO Western Pacific Region, 2011<sup>1</sup>**

Country	Measles and rubella		Measles													Rubella				
			Serology									Virus detection				Total number of lab confirmed cases	Serum and blood (includes DBS)			
	Serum					Blood		Results ≤ 7 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		Rubella IgM pending			
	No.	No.	No.	No.	%	No.	No. received		No. (+)	%	No. of samples tested	No. of isolates				No. of samples tested		No. of (+)	No.	No.
Australia	159	254	77	25	6	46	59.7	0	0	-	100.0	0	0	167	134	111	40	5	1	0
Cambodia	3 201	3 208	3 038	288	2	2 748	90.5	0	170	8	55.6	0	0	0	0	296	3 038	1 048	60	0
China																				
Hong Kong (China)	379	434	342	6	5	331	96.8	0	0	-	98.2	19	2	29	6	7	352	45	2	0
Macao (China)	47	47	47	1	0	46	97.9	0	0	-	97.9	0	0	0	0	1	47	1	1	0
Japan																				
Lao People's Democratic Republic	181	181	181	12	0	169	93.4	0	0	-	82.1	0	0	0	0	12	181	37	21	0
Malaysia	4 923	5 009	4 975	1 582	109	3 284	66.0	0	0	-	100.0	4 145	118	481	114	1 582	3 360	383	193	1
Mongolia	182	182	182	0	0	182	100.0	0	0	-	100.0	0	0	0	0	0	182	14	5	1
New Zealand	1 175	1 424	693	161	11	520	75.0	1	2	0	99.0	17	2	701	389	467	95	4	1	12
Papua New Guinea	144	144	60	0	0	60	100.0	0	84	0	30.7	0	0	0	0	0	144	8	9	2
Philippines	7 620	7 620	7 620	3 829	424	3 367	44.2	0	0	-	72.6	179	30	0	0	3 829	3 831	1 115	322	0
Republic of Korea	243	288	227	41	21	165	72.7	0	0	-	98.2	17	1	79	13	42	227	19	32	0
Singapore	581	831	239	56	2	181	75.7	0	0	-	97.6	273	42	65	4	95	376	9	18	0
Viet Nam (northern)	2 466	2 466	1 460	8	4	1 447	99.1	1	0	-	62.4	55	0	0	0	8	2 465	1 413	134	0
Viet Nam (southern)	1 729	1 739	1 475	6	9	1 460	99.0	0	0	-	92.9	10	0	10	0	6	1 721	1 084	110	0
Fiji	527	528	518	2	1	515	99.4	0	10	0	47.2	0	0	0	0	2	527	151	57	0
<b>Total</b>	<b>23 557</b>	<b>24 355</b>	<b>21 134</b>	<b>6 017</b>	<b>594</b>	<b>14 521</b>	<b>68.7</b>	<b>2</b>	<b>266</b>	<b>8</b>	<b>78.6</b>	<b>4 715</b>	<b>195</b>	<b>1 532</b>	<b>660</b>	<b>6 458</b>	<b>16 586</b>	<b>5 336</b>	<b>966</b>	<b>16</b>

<sup>1</sup> National measles laboratory monthly reports from January to December 2011.

**Table 3B. Measles and rubella laboratory performance, WHO Western Pacific Region, 2012<sup>1</sup>**

Country	Measles and rubella		Measles													Rubella				
			Serology									Virus detection				Serum and blood (includes DBS)				
	Total number of cases tested	Total number of samples received	Serum					Blood		Results ≤ 7 days	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	Rubella IgM pending	
			Samples tested for measles IgM	Measles IgM (+)	Measles IgM equiv	Measles IgM (-)		Measles IgM pending	DBS samples		No. of samples tested	No. of isolates	No. of samples tested	No. of (+)						
No.	No.	No.	No.	%	No.	No. received	No. (+)	%	No. of samples tested	No. of isolates	No. of samples tested	No. of (+)	No.	No.	No.	No.				
Australia	75	88	13	8	1	4	30.8	0	0	-	100.0	0	0	71	68	65	12	5	0	0
Cambodia	953	955	841	0	1	840	99.9	0	111	0	98.8	0	0	0	0	0	841	184	0	0
China																				
Hong Kong (China)	397	451	408	4	6	398	97.5	0	0	-	99.0	16	2	24	5	4	379	20	4	0
Macao (China)	49	49	49	2	0	47	95.9	0	0	-	98.0	0	0	0	0	2	49	3	0	0
Japan																				
Lao People's Democratic Republic	360	360	360	1	5	354	98.3	0	0	-	83.9	0	0	0	0	1	360	50	62	0
Malaysia	7 919	8 202	7 442	1 712	113	5 617	75.5	0	0	-	97.7	1 304	86	0	0	1 745	5 612	818	267	0
Mongolia	587	588	586	0	0	586	100.0	0	0	-	100.0	2	0	2	0	0	586	235	10	0
New Zealand	297	326	144	8	5	131	91.0	0	0	-	99.2	4	0	158	46	51	43	5	2	0
Papua New Guinea	60	60	60	0	0	60	100.0	0	0	-	53.3	0	0	0	0	0	60	22	7	0
Philippines	2 792	2 805	2 795	648	121	2 026	72.5	0	0	-	95.5	39	3	7	2	650	2 156	121	130	4
Republic of Korea	204	211	204	15	13	176	86.3	0	0	-	100.0	1	0	27	0	15	203	10	19	0
Singapore	506	666	220	13	5	202	91.8	0	0	-	97.1	155	4	0	0	17	335	16	12	0
Viet Nam (northern)	438	438	358	4	8	342	95.5	4	0	-	86.1	0	0	0	0	4	438	94	34	7
Viet Nam (southern)	295	318	295	1	1	293	99.3	0	0	-	98.0	23	0	23	0	1	295	23	18	0
Fiji	169	170	168	0	1	167	99.4	0	2	0	92.9	0	0	0	0	0	169	24	9	0
<b>Total</b>	<b>15 101</b>	<b>15 687</b>	<b>13 943</b>	<b>2 416</b>	<b>280</b>	<b>11 243</b>	<b>80.6</b>	<b>4</b>	<b>113</b>	<b>0</b>	<b>96.7</b>	<b>1 544</b>	<b>95</b>	<b>312</b>	<b>121</b>	<b>2 555</b>	<b>11 538</b>	<b>1 630</b>	<b>574</b>	<b>11</b>

<sup>1</sup> National measles laboratory monthly reports from January to October 2012.

Table 4A. Measles genotype distribution of cases with onset in 2011 and 2012<sup>1</sup>, WHO Western Pacific Region

Country	2011											2012												
	Total confirmed cases <sup>1</sup>	Total Lab confirmed <sup>1</sup>	GENOTYPES <sup>2</sup>								Pending	Total	Total confirmed cases <sup>1</sup>	Total Lab confirmed <sup>1</sup>	GENOTYPES <sup>2</sup>								Pending	Total
			B3	D4	D8	D9	D11	G3	H1	A					B3	D4	D8	D9	D11	G3	H1	A		
Australia	192	166	-	31	25	38	-	-	1	5	3	103	187	166	2	-	35	2	-	1	-	1	-	41
Brunei Darussalam	4	4	-	-	-	-	-	-	-	-	-	0	1	1	-	-	-	-	-	-	-	-	-	0
Cambodia	722	320	-	-	-	19	-	-	6	-	-	25	0	0	-	-	-	-	-	-	-	-	-	0
China	9 943	8 951	-	-	-	-	1	-	175	2	-	178	4 812	4 717	-	-	-	6	-	-	231	3	-	240
Hong Kong (China)	12	6	-	-	1	3	-	-	1	-	-	5	6	3	-	-	-	2	-	-	1	-	-	3
Macao (China)	1	1	-	-	1	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	0
Japan	410	322	-	51	7	35	-	1	-	4	-	98	224	181	-	5	41	8	-	-	7	2	-	63
Lao People's Democratic Republic	113	12	-	-	-	-	-	-	12	-	-	12	5	1	-	-	-	-	-	-	-	-	-	0
Malaysia	1 569	1 445	-	-	10	33	-	3	-	3	-	49	1 930	1 546	-	-	32	62	-	-	-	-	-	94
Mongolia	0	0	-	-	-	-	-	-	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	0
New Zealand	599	428	-	22	3	12	-	-	-	-	-	37	49	46	-	7	1	-	-	-	-	2	-	10
Papua New Guinea	0	0	-	-	-	-	-	-	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	0
Philippines	6 555	3 240	-	-	-	24	-	-	-	-	-	24	1 346	568	-	-	-	5	-	-	-	-	-	5
Republic of Korea	43	40	-	-	-	12	-	-	-	1	-	13	2	2	-	-	-	-	-	-	-	-	-	0
Singapore	143	143	-	1	9	33	-	1	-	-	2	46	33	28	-	-	-	4	-	-	-	-	-	4
Viet Nam	745	22	-	-	-	-	-	-	2	-	-	2	413	5	-	-	-	-	-	-	-	-	-	0
Pacific island countries and areas	2	2	-	-	-	-	-	-	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	0
<b>Total</b>	<b>21 053</b>	<b>15 102</b>	<b>-</b>	<b>105</b>	<b>56</b>	<b>209</b>	<b>1</b>	<b>5</b>	<b>197</b>	<b>15</b>	<b>5</b>	<b>593</b>	<b>9 009</b>	<b>7 265</b>	<b>2</b>	<b>12</b>	<b>109</b>	<b>89</b>	<b>0</b>	<b>1</b>	<b>239</b>	<b>8</b>	<b>0</b>	<b>460</b>

<sup>1</sup> Sources: National measles surveillance monthly reports from January to October 2012 (Table 2A).

<sup>2</sup> Sources: National and regional measles reference laboratory monthly reports from January to October 2012 and the Measles Nucleotide Sequence online database (MeaNS), whichever has the greater number.

Table 4B. Rubella genotypes distribution of cases with onset in 2011 and 2012<sup>1</sup>, WHO Western Pacific Region

Country	2011						2012						
	Samples tested for rubella IgM <sup>1</sup>	Rubella IgM positive <sup>1</sup>	Genotypes <sup>2</sup>			Total	Samples tested for rubella IgM <sup>1</sup>	Rubella IgM positive <sup>1</sup>	Genotypes <sup>2</sup>			Pending	Total
			1E	1j	2B				1E	1j	2B		
Australia	40	5	-	-	-	0	12	5	-	-	-	-	0
Brunei Darussalam			-	-	-	0			-	-	-	-	0
Cambodia	3 038	1 048	-	-	-	0	841	184	-	-	3	-	3
China			154	-	18	172			132	-	62	-	194
Hong Kong (China)	352	45	7	-	8	15	379	20	6	-	8	-	14
Macao (China)	47	1	-	-	-	0	49	3	-	-	-	-	0
Japan			2	1	2	5			-	-	1	-	1
Lao People's Democratic Republic	181	37	1	-	2	3	360	50	-	-	-	-	0
Malaysia	3 360	383	-	-	6	6	5 612	818	-	-	3	-	3
Mongolia	182	14	-	-	-	0	586	235	-	-	-	-	0
New Zealand	95	4	-	-	5	5	43	5	-	-	-	-	0
Papua New Guinea	144	8	-	-	2	2	60	22	-	-	-	-	0
Philippines	3 831	1 115	-	-	-	0	2 156	121	-	2	1	-	3
Republic of Korea	227	19	-	-	-	0	203	10	-	-	-	-	0
Singapore	376	9	-	-	-	0	335	16	-	-	-	-	0
Viet Nam	4 186	2 497	-	-	24	24	733	117	-	-	-	-	0
Pacific island countries and areas	527	151	-	-	2	2	169	24	-	-	-	-	0
<b>Total</b>	<b>16 586</b>	<b>5 336</b>	<b>164</b>	<b>1</b>	<b>69</b>	<b>234</b>	<b>11 538</b>	<b>1 630</b>	<b>138</b>	<b>2</b>	<b>78</b>	<b>0</b>	<b>218</b>

<sup>1</sup> Sources: National measles laboratory monthly reports from January to October 2012 (Table 3).

<sup>2</sup> Sources: National and regional measles reference laboratory monthly reports from January to October 2012 and the Measles Nucleotide Sequence online database (MeaNS), whichever has the greater number.

Expanded Programme on Immunization  
Regional Office for the Western Pacific  
World Health Organization

P.O. Box 2932, 1000 Manila, Philippines  
Tel. No. (63 2) 5288001  
Fax No. (63 2) 5211036, 5260279

Please send your comments and monthly data before the 10th of the month to:  
[WPR\\_EPIdata@wpro.who.int](mailto:WPR_EPIdata@wpro.who.int)