

MEASLES-RUBELLA

With this issue, the Western Pacific Regional Office is now publishing the *Measles-Rubella Bulletin* on a monthly basis in order to provide more timely data updates and feedback to Member States and partners. We will continue to provide analysis and commentary on a periodic basis.

Thanks to all countries and areas in the Region for making this publication possible and for your commitment to our common regional goal to eliminate measles by 2012 and accelerate control of rubella and prevention of congenital rubella syndrome.

Table 1A. Completeness and timeliness of epidemiologic reporting, Western Pacific Region, 2009–2011

Country	2009		2010		2011†					Completeness	Timeliness
	Completeness	Timeliness	Completeness	Timeliness	Jan	Feb	Mar	Apr	May		
					10 Feb	10 Mar	10 Apr	10 May	10 Jun		
Australia	100%	100%	100%	100%	08 Feb	10 Mar	08 Apr	06 May	09 Jun	100%	100%
Brunei Darussalam	100%	100%	100%	100%	08 Feb	09 Mar	07 Apr	09 May	07 Jun	100%	100%
Cambodia	100%	83%	75%	42%	10 Feb	10 Mar	10 Apr	10 May	08 Jun	100%	100%
China	92%	0%	100%	58%	14 Feb	10 Mar	12 Apr	11 May	13 Jun	100%	20%
Hong Kong (China)	100%	100%	100%	100%	09 Feb	09 Mar	07 Apr	06 May	09 Jun	100%	100%
Japan	100%	92%	100%	100%	04 Feb	07 Mar	05 Apr	06 May	10 Jun	100%	100%
Lao PDR	58%	42%	83%	75%	09 Feb	10 Mar	08 Apr	10 May	10 Jun	100%	100%
Macao (China)	100%	83%	100%	100%	07 Feb	04 Mar	06 Apr	05 May	07 Jun	100%	100%
Malaysia	58%	42%	92%	83%	09 Feb	07 Mar	08 Apr		09 Jun	80%	80%
Mongolia	100%	75%	100%	92%	09 Feb	07 Mar	09 Apr	05 May	07 Jun	100%	100%
New Zealand	100%	92%	100%	92%	07 Feb	07 Mar	05 Apr	12 May	08 Jun	100%	80%
Papua New Guinea	67%	17%	67%	33%	16 Feb	29 Mar				40%	0%
Philippines	75%	58%	100%	92%	06 Feb	14 Mar	10 Apr	03 May	03 Jun	100%	80%
Republic of Korea	50%	17%	92%	92%	10 Feb	08 Mar	07 Apr	09 May	10 Jun	100%	100%
Singapore	100%	67%	100%	100%	02 Feb	01 Mar	06 Apr	05 May	06 Jun	100%	100%
Viet Nam	83%	25%	92%	25%	10 Feb		10 Apr		02 Jun	60%	60%
Pacific island countries*	67%	42%	92%	58%	10 Feb	10 Mar				40%	40%
Completeness	85.3%		93.6%		100%	94%	88%	76%	88%	89.4%	
Timeliness		60.8%		78.9%	88%	82%	82%	65%	82%		80.0%

† Surveillance data through May 2011

* PICs are expected to report to the Regional Office by 15th (or the next working day) of the following month

Legend: black = timely report; red = untimely report

Table 1B. Completeness and timeliness of laboratory reporting, Western Pacific Region, 2009–2011

Country	2009		2010		2011					Completeness†	Timeliness*
	Completeness	Timeliness	Completeness	Timeliness	Jan	Feb	Mar	Apr	May		
Australia	100%	83%	100%	100%	08 Feb	03 Mar	05 Apr	04 May	03 Jun	100%	100%
Cambodia	50%	17%	42%	25%	07 Feb	07 Mar	07 Apr	09 May	09 Jun	100%	100%
China	0%	0%	0%	0%						0%	0%
Hong Kong (China)	100%	100%	100%	100%	09 Feb	09 Mar	09 Apr	09 May	09 Jun	100%	100%
Japan	0%	0%	0%	0%						0%	0%
Lao PDR	8%	0%	58%	58%	10 Feb	10 Mar	08 Apr	10 May	10 Jun	100%	100%
Macao (China)	100%	92%	100%	100%	07 Feb	04 Mar	07 Apr	05 May	08 Jun	100%	100%
Malaysia	75%	8%	92%	58%	09 Feb	07 Mar	08 Apr	10 May	09 Jun	100%	100%
Mongolia	92%	92%	100%	100%	08 Feb	04 Mar	06 Apr	04 May	07 Jun	100%	100%
New Zealand	83%	8%	100%	33%	09 Feb	11 Mar	08 Apr	10 May	10 Jun	100%	80%
Papua New Guinea	0%	0%	75%	33%	10 Feb	08 Mar	12 Apr	09 May		80%	60%
Philippines	100%	33%	100%	83%	08 Feb	10 Mar	08 Apr	10 May	25 May	100%	100%
Republic of Korea	75%	50%	100%	100%	10 Feb	09 Mar	08 Apr	10 May	08 Jun	100%	100%
Singapore	100%	100%	100%	100%	07 Feb	07 Mar	08 Apr	06 May	07 Jun	100%	100%
Viet Nam (northern)	92%	58%	100%	58%	08 Feb	21 Mar	09 Apr	10 May	16 Jun	100%	60%
Viet Nam (southern)	92%	75%	83%	50%	09 Feb	10 Mar	08 Apr	10 May	08 Jun	100%	100%
Fiji	67%	58%	67%	50%	09 Feb	10 Mar	11 Apr	04 May		80%	60%
Completeness	66.7%		77.5%		88%	88%	88%	88%	76%	85.9%	
Timeliness		45.6%		61.8%	88%	76%	76%	88%	71%		80.0%

† Same standard for completeness is applied for both epidemiologic and laboratory reporting.

* Deadline for submission is on the 10th of the following month.

Table 2A. Measles case classification and incidence, by country and area, Western Pacific Region, 2010–2011 ¹

Country	2010										2011 ¹									
	Population (in millions) ³	Suspected measles cases	Confirmed measles cases				Discarded cases	Pending classification	Deaths due to measles	Measles incidence per 1 million pop.	Population (in millions) ³	Suspected measles cases	Confirmed measles cases				Discarded cases	Pending classification	Deaths due to measles	Measles incidence per 1 million pop.
			Lab	Epi-linked	Clinical	Total							Lab	Epi-linked	Clinical	Total				
Australia ²	22.27	70	65	5	0	70	0	0	0	3.1	22.61	102	93	9	0	102	0	0	0	10.8
Brunei Darussalam	0.40	7	0	0	0	0	7	0	0	N/A	0.41	3	0	0	0	0	1	2	0	0.0
Cambodia	14.14	3572	451	0	705	1 156	2416	0	6	81.8	14.31	669	163	0	41	204	363	102	0	34.2
China	1341.34	56 766	25 822	116	12 221	38 159	No data	No data	27	28.4	1347.57	8106 ⁵	No data	No data	No data	8106 ⁵	No data	No data	8	14.4
Hong Kong (China)	7.05	24	4	0	7	11	13	0	0	1.6	7.12	72	2	1	1	4	61	7	0	1.3
Japan	126.54	461	306	3	121	430	31	0	0	3.4	126.50	302	204	13	57	274	27	1	0	5.2
Lao PDR	6.20	332	6	0	147	153	179	0	0	24.7	6.29	96	0	0	3	3	93	0	0	1.1
Macao (China)	0.54	28	0	0	0	0	28	0	0	N/A	0.56	4	1	0	0	1	3	0	0	4.3
Malaysia	28.40	1096	68	2	4	74	1022	0	0	2.6	28.86	1 425	157	37	26	220	852	353	0	18.3
Mongolia	2.76	160	0	0	7	7	153	0	0	2.5	2.80	65	0	0	0	0	65	0	0	N/A
New Zealand	4.37	48	15	21	12	48	0	0	0	11.0	4.41	56	42	8	0	50	0	6	0	27.2
Papua New Guinea	6.86	26	0	0	0	0	26	0	0	N/A	7.01	2	0	0	0	0	0	2	0	N/A
Philippines	93.26	10 357	2873	137	3362	6372	3985	0	34	68.3	94.85	7302	2287	131	2895	5313	1940	49	24	134.4
Republic of Korea	48.18	246	95	16	3	114	132	0	0	2.4	48.39	53	2	0	3	5	47	1	0	0.2
Singapore ²	5.09	54	54	0	0	54	0	0	0	10.6	5.19	44	44	0	0	44	0	0	0	20.4
Viet Nam	87.85	6419	757	89	977	1823	2915	1681	1	20.8	88.79	2724	4	1	63	68	1925	731	0	1.8
Pacific island countries and areas																				
American Samoa	0.07	0	0	0	0	0	0	0	0	0.0	0.07	0	0	0	0	0	0	0	0	0.0
Cook Islands	0.02	0	0	0	0	0	0	0	0	0.0	0.02	0	0	0	0	0	0	0	0	0.0
Fiji	0.86	62	0	0	0	0	0	62	0	N/A	0.87	1	0	0	0	0	0	1	0	N/A
French Polynesia	0.27	0	0	0	0	0	0	0	0	0.0	0.27	0	0	0	0	0	0	0	0	0.0
Guam	0.18	0	0	0	0	0	0	0	0	0.0	0.18	0	0	0	0	0	0	0	0	0.0
Kiribati	0.10	0	0	0	0	0	0	0	0	0.0	0.10	0	0	0	0	0	0	0	0	0.0
Marshall Islands	0.05	0	0	0	0	0	0	0	0	0.0	0.05	0	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	0.11	0	0	0	0	0	0	0	0	0.0
Nauru	0.01	0	0	0	0	0	0	0	0	0.0	0.01	0	0	0	0	0	0	0	0	0.0
New Caledonia	0.25	0	0	0	0	0	0	0	0	0.0	0.25	0	0	0	0	0	0	0	0	0.0
Niue	0.00	0	0	0	0	0	0	0	0	0.0	0.00	0	0	0	0	0	0	0	0	0.0
Northern Mariana Islands	0.06	0	0	0	0	0	0	0	0	0.0	0.06	0	0	0	0	0	0	0	0	0.0
Palau	0.02	0	0	0	0	0	0	0	0	0.0	0.02	0	0	0	0	0	0	0	0	0.0
Samoa	0.18	0	0	0	0	0	0	0	0	0.0	0.18	0	0	0	0	0	0	0	0	0.0
Solomon Islands	0.54	0	0	0	0	0	0	0	0	0.0	0.55	0	0	0	0	0	0	0	0	0.0
Tokelau	0.00	0	0	0	0	0	0	0	0	0.0	0.00	0	0	0	0	0	0	0	0	0.0
Tonga	0.10	0	0	0	0	0	0	0	0	0.0	0.10	0	0	0	0	0	0	0	0	0.0
Tuvalu	0.01	0	0	0	0	0	0	0	0	0.0	0.01	0	0	0	0	0	0	0	0	0.0
Vanuatu	0.24	0	0	0	0	0	0	0	0	0.0	0.25	0	0	0	0	0	0	0	0	0.0
Wallis and Futuna	0.01	0	0	0	0	0	0	0	0	0.0	0.01	0	0	0	0	0	0	0	0	0.0
Western Pacific Region	1798.34	79 728	30 516	389	17 566	48 471	10 907	1743	68	27.0	1808.80	21 026	2999	200	3089	14 394	5377	1255	32	19.1

¹ Monthly reports through May

² Reports only laboratory-confirmed cases

³ Population figures from United Nations World Population Prospects: The 2010 Revision

⁴ Data from WHO/UNICEF Joint Reporting Form (JRF)

⁵ Based on the Notifiable Infectious Diseases statistic data of China MOH (<http://www.moh.gov.cn/publicfiles//business/htmlfiles/wsb/pyqxx/list.htm>)

Green <1 confirmed measles case / 1 000 000 population
 Yellow 1-1.9 confirmed measles case / 1 000 000 population
 Red > 2 confirmed cases / 1 000 000 population

Table 2B. Measles surveillance performance indicators, by country and area, Western Pacific Region, 2010–2011 ¹

Country	2010					2011 ¹					
	Discarded measles rate per 100 000 pop	Second level units with ≥ 1 discarded cases per 100 000	Suspected cases with adequate investigation	Suspected cases with adequate blood specimens ³	Percent clinically confirmed cases ⁴	Discarded measles rate per 100 000 pop	Annualized discarded measles rate per 100 000 pop	Second level units with ≥ 1 discarded cases per 100 000 (annualized)	Suspected cases with adequate investigation	Suspected cases with adequate blood specimens ³	Percent clinically confirmed cases ⁴
	≥ 2	≥ 80%	≥ 80%	≥ 80%	≤ 10%	≥ 2	≥ 2	≥ 80%	≥ 80%	≥ 80%	≤ 10%
Australia ²	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data
Brunei Darussalam	1.8	100.0%	85.7%	100.0%	0.0%	0.2	0.6	0.0%	66.7%	100.0%	0.0%
Cambodia	17.1	75.0%	60.1%	79.3%	61.0%	2.5	6.1	33.3%	60.8%	92.8%	20.1%
China	No data	No data	No data	No data	32.0%	No data	No data	No data	No data	No data	No data
Hong Kong (China)	0.2	0.0%	45.8%	66.7%	63.6%	0.9	2.1	100.0%	27.8%	81.7%	25.0%
Japan	0.0	0.0%	Insufficient data	Insufficient data	28.1%	0.0	0.1	0.0%	Insufficient data	Insufficient data	20.8%
Lao PDR	2.9	35.3%	19.3%	23.8%	96.1%	1.5	3.5	47.1%	0.0%	60.4%	100.0%
Macao (China)	5.2	100.0%	100.0%	100.0%	0.0%	0.5	1.3	0.0%	100.0%	100.0%	0.0%
Malaysia	3.6	87.5%	72.1%	82.2%	5.4%	3.0	7.1	93.8%	33.8%	73.1%	11.8%
Mongolia	5.6	31.8%	65.0%	92.5%	0.0%	2.3	5.6	27.3%	83.1%	100.0%	0.0%
New Zealand	Insufficient data	Insufficient data	Insufficient data	Insufficient data	25.0%	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	0.0%
Papua New Guinea	0.4	5.0%	46.2%	100.0%	0.0%	0.0	0.0	0.0%	50.0%	50.0%	0.0%
Philippines	4.3	94.1%	14.5%	67.8%	52.8%	2.0	4.9	94.1%	36.0%	66.3%	54.5%
Republic of Korea	0.3	6.3%	61.8%	73.9%	2.6%	0.1	0.2	0.0%	58.5%	69.8%	60.0%
Singapore ²	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data
Viet Nam	3.3	53.1%	59.0%	59.9%	53.6%	2.2	5.2	50.0%	63.9%	76.8%	92.6%
Pacific island countries and areas											
American Samoa	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Cook Islands	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Fiji	0.0	0.0%	0.0%	Not applicable	Not applicable	0.0	0.0	0.0%	0.0%	Not applicable	Not applicable
French Polynesia	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Guam	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Kiribati	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Marshall Islands	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Micronesia, Federated States of	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Nauru	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
New Caledonia	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Niue	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Northern Mariana Islands	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Palau	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Samoa	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Solomon Islands	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Tokelau	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Tonga	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Tuvalu	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Vanuatu	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Wallis and Futuna	0.0	0.0%	Not applicable	Not applicable	Not applicable	0.0	0.0	0.0%	Not applicable	Not applicable	Not applicable
Western Pacific Region	2.6	36.8%	38.5%	67.8%	36.3%	1.3	3.0	32.0%	43.3%	71.1%	50.3%

¹ Monthly reports for January to May

² Reports only laboratory-confirmed cases

³ Excludes epi-linked cases; not applicable for countries reporting only laboratory confirmed cases

⁴ Among all 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 3. Measles and rubella laboratory performance, Western Pacific Region, 2011¹

Country	Measles and rubella		Measles															Rubella					
			Serology									Virus detection						Total number of lab confirmed cases	Serum and blood				Virus detection
	Serum and blood					DBS		Results ≤ 7 days	Measles virus isolation/ detection (swab, urine, PBMC)		Measles RT - PCR		Measles genotypes		Samples tested for rubella IgM	Rubella IgM (+)	Rubella IgM equiv		Rubella IgM pending	Rubella genotypes			
	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. of samples genotyped	Genotypes							No. of samples genotyped		
No.	No.	No.	No.	%	No.	No. received	No. (+)	%	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No. of samples genotyped		
Australia	101	173	51	21	3	27	52.9%	0	0	-	100%	0	0	112	92	75	A, D4, D8, D9, H1	74	21	2	1	0	0
Cambodia	1678	1681	1604	228	0	1376	85.8%	0	1	0	76.0%	76	0	76	0	0	-	228	1604	488	1	665	0
China																							
Hong Kong (China)	118	138	111	1	2	108	97.3%	0	0	-	97.3%	4	1	6	1	1	D8	1	116	14	2	4	8
Japan																	D4, D8, D9*						
Lao PDR	49	49	49	0	0	49	100.0%	0	0	-	100.0%	0	0	0	0	0	-	0	49	7	7	0	0
Macao (China)	19	19	19	1	0	18	94.7%	0	0	-	94.7%	0	0	0	0	0	-	1	19	0	1	0	0
Malaysia	1478	1513	1507	296	28	1183	78.5%	0	0	-	100%	0	0	0	0	11	A, B3, D9, G3**	296	1191	144	93	1	0
Mongolia	65	65	65	0	0	65	100%	0	0	-	100%	0	0	0	0	0	-	0	65	8	2	0	0
New Zealand	194	232	153	16	3	134	87.6%	0	0	-	98.6%	1	0	80	23	17	D4*, D8, D9	29	19	0	0	3	0
Papua New Guinea	9	9	9	0	0	8	88.9%	1	0	-	100.0%	0	0	0	0	0	-	0	9	6	0	1	0
Philippines	6157	6157	6026	3314	331	2378	39.5%	3	0	-	56.4%	0	0	0	0	-	D9***	3314	2726	937	222	7	0
Republic of Korea	75	84	62	6	8	48	77.4%	0	0	-	100.0%	3	0	27	1	1	A	6	63	6	11	0	0
Singapore	234	394	108	26	1	81	75.0%	0	0	-	96.6%	129	18	3	3	22	D4, D8, D9, G3	41	157	7	12	2	0
Viet Nam (northern)	1884	1884	1144	1	3	1120	97.9%	20	0	-	65.9%	0	0	0	0	0	-	1	1884	1088	129	11	0
Viet Nam (southern)	1502	1511	1325	4	8	1307	98.6%	6	0	-	94.2%	9	0	9	0	0	-	4	1498	1006	83	0	0
Fiji	8	8	2	0	0	2	100.0%	0	6	0	14.3%	0	0	0	0	0	-	0	8	0	0	0	0
Total	13 571	13 917	12 235	3914	387	7904	64.6%	30	7	0	71.2%	222	19	313	120	127		3995	9429	3713	564	694	8

¹ Monthly reports through May

* Reported by Virus Reference Department Centre for Infections Health Protection Agency

** Reported by National Public Health Laboratory, Malaysia

*** Reported by Public Health Laboratory Center (PHLC), Hong Kong (China)

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

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Please send your comments and monthly data before the 10th of the month to:
WPR_EPIdata@wpro.who.int