

News in Brief

Fiji - In January 2009, a cluster of suspected measles cases in Suva led to the laboratory confirmation of one case with rash onset on 16 January. A second laboratory confirmed case with rash onset was identified in Nadi around 7 February. Enhanced surveillance has led to over 45 suspected measles case reports through April, none of which were confirmed as measles, suggesting the two laboratory confirmed cases to be sporadic cases.

Viet Nam - A measles outbreak has occurred in Viet Nam involving at least 1500 laboratory confirmed cases as of April 2009. The outbreak began among university students in Ha Noi in October 2008, and then spread to provinces in the North Region, and then to the Central, Highland and South Regions. Attack rates were highest among young adults, who appeared to be largely responsible for virus transmission, particularly in the North and in the first months of the outbreak. Persons 18–26 years old accounted for 48.8% of all confirmed cases as of April 2009, ages missed by prior supplementary immunization activities (SIAs).

SAGE - The Strategic Advisory Group of Experts on Immunization (SAGE) in their April 2009 meeting recommended that second dose of measles-containing vaccine may be added to routine schedule when first dose of measles containing vaccine coverage has been at least 80% for three consecutive years; that MCV2 be administered at 15–18 months when MCV1 is provided at 9 months of age, and at either 15–18 months or prior to school entry when MCV1 is given at 12 months; and that immunization status be systematically verified before school entry.

Reporting (Table 1 & Figure)

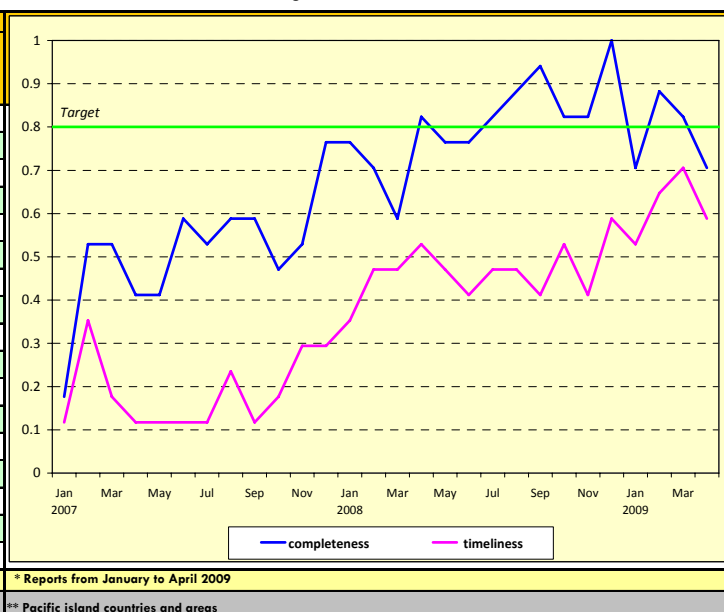
Completeness and timeliness of reporting measles surveillance data to the WHO Western Pacific Regional Office has improved since 2007. Completeness improved from 51% in 2007 to 78% in 2008, and has remained at 78% from January to April 2009. Timeliness improved from 19% in 2007, to 47% in 2008 and to 62% in 2009. Substantial improvements in timeliness were noted for Australia, Brunei Darussalam, Cambodia, Japan, Macau

(China), and Mongolia. Several of these countries and areas also had impressive improvements in completeness. In the first four months of 2009, nine countries and areas achieved 100% completeness and seven achieved 100% timeliness. The Regional Office congratulates all countries contributing to better monitoring of progress towards the 2012 regional measles elimination goal.

Table 1: Completeness and timeliness of reporting, Western Pacific Region, 2007-2009*

Country	2007		2008		2009*	
	Completeness	Timeliness	Completeness	Timeliness	Completeness	Timeliness
Australia	50%	8%	100%	67%	100%	100%
Brunei Darussalam	0%	0%	75%	58%	100%	100%
Cambodia	33%	8%	75%	25%	100%	75%
China	75%	0%	92%	0%	75%	0%
Hong Kong (China)	75%	25%	100%	100%	100%	100%
Japan	0%	0%	67%	58%	100%	100%
Lao PDR	8%	0%	42%	8%	25%	25%
Macao (China)	92%	17%	100%	50%	100%	100%
Malaysia	25%	0%	50%	8%	75%	50%
Mongolia	67%	25%	100%	67%	100%	100%
New Zealand	83%	58%	100%	100%	100%	100%
Papua New Guinea	25%	8%	67%	42%	25%	0%
Philippines	75%	42%	75%	50%	50%	25%
Republic of Korea	33%	8%	17%	8%	50%	0%
Singapore	83%	25%	100%	83%	100%	75%
Viet Nam	42%	17%	100%	25%	75%	50%
PICs**	100%	75%	75%	42%	50%	50%
Completeness	51%		78.4%		77.9%	
Timeliness	19%		46.6%		61.8%	

Figure: Completeness and timeliness of reporting, by month, Western Pacific Region, 2007-2009*



Incidence (Table 2a)

Annualized measles incidence through April 2009 was 9.5 per million population, compared with 32.1 in 2008 (excluding China, from which data were not available), and 11.8 in 2007 (excluding Brunei Darussalam, China and Japan, from which data were not available). In fact, annualized incidence has decreased in 30 countries and areas from 2008 to 2009. China accounted for 83.3% and 90.1% of all confirmed measles cases reported in 2007 and 2008, respectively; Japan accounted for 13.0% and 7.5%, respectively. The

number of cases reported from Japan in 2009 has decreased substantially: annualized incidence for 2009 is 5.7 vs. 85.5 in 2008. Three countries have had notably higher annualized incidence in 2009 versus 2008: Australia (12.1 vs. 3.1), New Zealand (24.0 vs. 3.6) and Viet Nam (26.5 vs. 2.9). The Philippines has had similar incidence in 2009 and 2008 (4.5 and 3.8, respectively), and Fiji, with its two cases, has an annualized incidence of 7.1 for 2009.

Surveillance Performance Indicators (Table 2b)

Regional summary surveillance performance indicator calculations are determined from countries that provide data needed to calculate the respective indicator. For example, as the number of suspected measles cases that are discarded as non-measles is not available for Australia, China and Singapore, the populations of these countries were excluded from the denominator in calculating the regional discarded measles rate in 2009.

Sensitivity of measles surveillance is monitored by the number of discarded measles cases per 100 000 population (target ≥ 2.0) and the percentage of "districts" with ≥ 1 discarded measles case per 100 000 population (target $\geq 80\%$). For this indicator, the Regional Office defines "district" as the second administrative level, which usually has approximately 500 000 to 1 000 000 population. The annualized regional discarded measles rate has decreased from 2.5 in 2007 to 1.6 in 2008 and 1.9 (annualized) in 2009. The decrease is largely attributable to Japan. While Japan established nationwide case-based measles surveillance and began reporting cases to the Regional Office in 2008,¹ very few discarded measles cases have been reported since that time. The addition of Japan's population to the denominator for 2008 and 2009 was not accompanied by a proportionate increase in the number of discarded measles cases, resulting in a decrease in the discarded measles rate in 2008 and 2009 compared with 2007. The percentage of "districts", or second level administrative units, with ≥ 1 discarded measles cases per 100 000 population has decreased from 30.6% in 2007, to 27.4% in 2008 and to 24.7% in 2009.

The percentage of suspected cases with adequate investigation (target $\geq 80\%$) has increased from 26.7% in 2007, to 47.4% in 2008, and 58.0% in 2009. An adequate investigation is defined as collection of essential data elements within 48 hours of notification.² From January to April 2009, three countries or areas (Brunei Darussalam, Macao [China], and Singapore) have achieved the target; three more (Cambodia,

Malaysia, and Viet Nam) have nearly achieved the target (i.e. 60%–79% of suspected cases had adequate investigations). In 2008, only Macao (China) achieved the target, and Brunei Darussalam, Hong Kong (China), and Malaysia nearly achieved the target.

The percentage of suspected cases with adequate blood specimens (target $\geq 80\%$) increased to 72.0% in 2009 compared with 62.2% in 2008 and 64.7% in 2007. Five countries or areas (Brunei Darussalam, Cambodia, Hong Kong [China], Macao [China] and Mongolia) have achieved the target; four more (Lao People's Democratic Republic, Malaysia, Philippines, and Viet Nam, have nearly achieved the target (i.e. 60%–79% of suspected cases had adequate specimens). In 2008, only Hong Kong [China] and Macao [China] achieved the target, and Malaysia, Mongolia and Viet Nam nearly achieved the target.

The percentage of specimens with serologic testing results reported within seven days after receipt by the laboratory (target $\geq 80\%$) decreased from 79.8% in 2007, to 76.3% in 2008 and to 73.6% in 2009. The decrease appears to be attributable primarily to the laboratories in Cambodia and the Philippines. In Cambodia, the percentage of specimens that had results within seven days decreased from 59.2% to 39.9% to 0.3% from 2007 to 2009, respectively. In the Philippines, this indicator decreased from 73.0% to 43.3% to 40.7% from 2007 to 2009. One main reason for the decrease in timeliness of specimen testing was the failure to procure adequate numbers of measles testing kits in a timely manner. The Regional Office has provided guidelines for improving stock management of measles test kits and reagents to network laboratories.

In summary, case-based measles surveillance has improved considerably since 2007 among most countries and areas as reflected by improved indicator data. This experience suggests that several years may be required to build up high-quality, nationwide case-based surveillance. Congratulations to the many Member States that have worked on and continue to improve surveillance performance; your ongoing efforts will be particularly important as you assess and eventually validate measles elimination status.

¹ CDC. Progress toward measles elimination-Japan, 1999-2008. *MMWR* 2008; 57:1049-1052

² WHO Regional Office of the Western Pacific. Monitoring measles surveillance and progress towards measles elimination. *Measles Bulletin* 2007, 1(13):1-2

Table 2a: Measles case classification and incidence, by country and area, Western Pacific Region, 2007-2009*

Country	2007			2008			2009*								
	Suspected measles cases	Total confirmed cases	Measles incidence per 1 million pop.	Suspected measles cases	Total confirmed cases	Measles incidence per 1 million pop.	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				
Australia †	11	11	0.5	65	65	3.1	85	85	0	0	85	0	0	0	12.1
Brunei Darussalam	No data	No data	No data	18	3	7.5	2	0	0	0	0	2	0	0	0.0
Cambodia	1294	394	27.3	4211	1765	120.1	904	6	0	48	54	697	153	0	10.8
China	118 031	109 023 ‡	82.1	144 221	131 441 ‡	98.4	33 238	No data	No data	No data	No data	No data	No data	24	No data
Hong Kong (China)	106	88	12.2	89	71	9.8	20	8	0	5	13	4	3	0	5.3
Japan	No data	18 000 §	140.7	10 950	10 944	85.5	241	124	4	113	241	0	0	0	5.7
Lao People's Democratic Republic	1670	1670	285.0	245	117	19.6	36	3	0	0	3	21	12	0	1.5
Macao (China)	1	0	0.0	25	5	10.3	3	0	0	0	0	3	0	0	0.0
Malaysia	1544	740	27.8	1909	333	12.3	464	23	0	57	80	132	252	0	8.7
Mongolia	110	110	41.8	370	31	11.7	35	0	0	0	0	35	0	0	0.0
New Zealand	25	25	6.0	15	15	3.6	37	3	26	5	34	0	3	0	24.0
Papua New Guinea	4	0	0.0	50	1	0.2	32	0	0	0	0	29	3	0	0.0
Philippines	888	500	5.7	1586	880	9.8	767	108	0	30	138	409	220	0	4.5
Republic of Korea	451	218	4.5	97	2	0.0	15	1	0	2	3	12	0	0	0.2
Singapore †	15	15	3.4	18	18	4.0	3	3	0	0	3	0	0	0	2.0
Viet Nam	5286	17	0.2	1872	258	2.9	3209	699	92	0	791	1459	959	0	26.5
Pacific island countries and areas		0													
American Samoa	0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Cook Islands	0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Fiji	9	0	0.0	13	0	0.0	35	3	0	0	3	6	26	0	10.6
French Polynesia	0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Guam	0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Kiribati	0	0	0.0	1	0	0.0	0	0	0	0	0	0	0	0	0.0
Marshall Islands	3	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Micronesia, Federated States of	0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Nauru	1	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
New Caledonia	3	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Niue	0	0	0.0	5	0	0.0	0	0	0	0	0	0	0	0	0.0
Northern Mariana Islands, Commonwealth of the	0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Palau	14	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Samoa	2	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Solomon Islands	0	0	0.0	4	0	0.0	0	0	0	0	0	0	0	0	0.0
Tokelau	1	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Tonga	0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Tuvalu	0	0	0.0	1	0	0.0	0	0	0	0	0	0	0	0	0.0
Vanuatu	0	0	0.0	0	0	0.0	1	0	0	0	0	0	1	0	0.0
Wallis and Futuna	0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0.0
Western Pacific Region	129 469	130 811	73.6	165 765	145 949	81.6	39 127	1066	122	260	1448	2809	1632	24	9.5

* Monthly reports for January-April 2009

† Only laboratory confirmed cases are reported from Australia and Singapore.

‡ Data from WHO/UNICEF Joint Reporting Form (JRF) 2007 and 2008

§ Among children <15 years old. CDC, Progress toward Measles Elimination - Japan, 1999 - 2008. *MMWR* 2008; 57:1049-1052.

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, 2007-2009¹

Country	Number of second level admin units ³	Discarded measles rate per 100 000 pop			Second admin level with ≥1 discarded measles case per 100 000 pop			Suspected cases with adequate investigation			Suspected cases with adequate blood specimens ⁴			Laboratory results ≤7 days ⁵		
		target = ≥2			target = ≥80%			target = ≥80%			target = ≥80%			target = ≥80%		
		2007	2008	2009 ¹	2007	2008	2009 ¹	2007	2008	2009 ¹	2007	2008	2009*	2007	2008	2009 ¹
Australia ²	8	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	100.0%	100.0%	
Brunei Darussalam	1	No data	3.8	1.5	No data	100.0%	100.0%	No data	66.7%	100.0%	No data	27.8%	100.0%	No data	No data	
Cambodia	24	6.2	16.6	14.0	58.3%	79.2%	54.2%	42.5%	47.0%	62.1%	67.5%	58.3%	93.7%	59.2%	39.9%	
China	31	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data	
Hong Kong (China)	1	0.2	0.2	0.2	0.0%	0.0%	0.0%	60.4%	77.5%	45.0%	74.5%	80.7%	80.0%	No data	97.5%	
Japan	47	No data	0.0	0.0	No data	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	No data	
Lao People's Democratic Republic	17	0.0	1.8	1.0	No data	29.4%	11.8%	No data	9.0%	33.3%	No data	26.1%	72.2%	No data	28.2%	
Macao (China)	1	0.2	4.1	1.8	0.0%	100.0%	100.0%	No data	88.0%	100.0%	No data	92.0%	100.0%	No data	94.4%	
Malaysia	15	3.0	5.8	1.4	No data	73.3%	33.3%	No data	75.3%	67.7%	No data	79.1%	75.9%	95.5%	98.1%	
Mongolia	21	0.0	12.8	3.9	0.0%	61.9%	9.5%	0.0%	21.9%	45.7%	7.3%	79.5%	100.0%	100.0%	100.0%	
New Zealand		0.0	0.0	0.0	No data	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	97.1%	
Papua New Guinea	20	0.1	0.1	1.3	0.0%	25.0%	0.0%	0.0%	36.7%	21.9%	100.0%	8.2%	6.3%	No data	No data	
Philippines	17	0.4	0.8	1.3	17.6%	29.4%	52.9%	8.6%	22.2%	14.9%	47.6%	49.4%	62.1%	73.0%	43.3%	
Republic of Korea	16	0.5	0.2	0.1	6.3%	0.0%	0.0%	29.3%	47.4%	40.0%	84.7%	52.6%	46.7%	100.0%	99.0%	
Singapore ²	1	0.0	No data	No data	No data	No data	No data	No data	44.4%	100.0%	No data	No data	Not	88.5%	98.4%	
Viet Nam	64	6.0	1.5	4.9	59.4%	28.1%	59.4%	26.0%	53.3%	67.1%	66.6%	76.5%	67.9%	67.5%	79.5%	
Pacific island countries and areas																
American Samoa	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	No data	
Cook Islands	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	No data	
Fiji	4	1.1	1.1	2.1	25.0%	25.0%	25.0%	0.0%	15.4%	14.3%	0.0%	84.6%	14.3%	No data	33.3%	
French Polynesia	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	No data	
Guam	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	No data	
Kiribati	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	0.0%	No data	No data	0.0%	No data	No data	No data	
Marshall Islands	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	33.3%	No data	No data	No data	33.3%	No data	No data	No data	
Micronesia, Federated States of	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	No data	
Nauru	1	9.9	0.0	0.0	100.0%	0.0%	0.0%	0.0%	No data	No data	0.0%	No data	No data	No data	No data	
New Caledonia	1	0.8	0.0	0.0	0.0%	0.0%	0.0%	0.0%	No data	No data	66.7%	No data	No data	No data	No data	
Niue	1	0.0	306.7	0.0	100.0%	100.0%	0.0%	No data	0.0%	No data	No data	0.0%	No data	No data	No data	
Northern Mariana Islands	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	No data	
Palau	1	20.0	0.0	0.0	100.0%	0.0%	0.0%	0.0%	No data	No data	7.1%	No data	No data	No data	No data	
Samoa	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	0.0%	No data	No data	0.0%	No data	No data	No data	No data	
Solomon Islands	1	0.0	0.6	0.0	0.0%	0.0%	0.0%	No data	0.0%	No data	No data	0.0%	No data	No data	No data	
Tokelau	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	0.0%	No data	No data	0.0%	No data	No data	No data	No data	
Tonga	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	No data	
Tuvalu	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	0.0%	No data	No data	0.0%	No data	No data	No data	
Vanuatu	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	No data	0.0%	No data	No data	0.0%	No data	No data	
Wallis and Futuna	1	0.0	0.0	0.0	0.0%	0.0%	0.0%	No data	No data	No data	No data	No data	No data	No data	No data	
Western Pacific Region		2.5	1.6	1.9	30.6%	27.4%	24.7%	26.7%	47.4%	58.0%	64.7%	62.2%	72.0%	79.8%	76.3%	

Green Reached or surpassed target

Yellow Nearly reached target: 1.00-1.99 for non-measles suspected case rate; 60-79% for other indicators

Red Substantially below target

¹ Monthly reports for January-April 2009

⁴ Excludes epi-linked cases from the denominator.

⁵ This indicator has been computed using data from laboratory reports.

² Australia and Singapore report only laboratory-confirmed cases.

³ Countries and areas with population ≤ 500 000 considered as 1 administrative unit