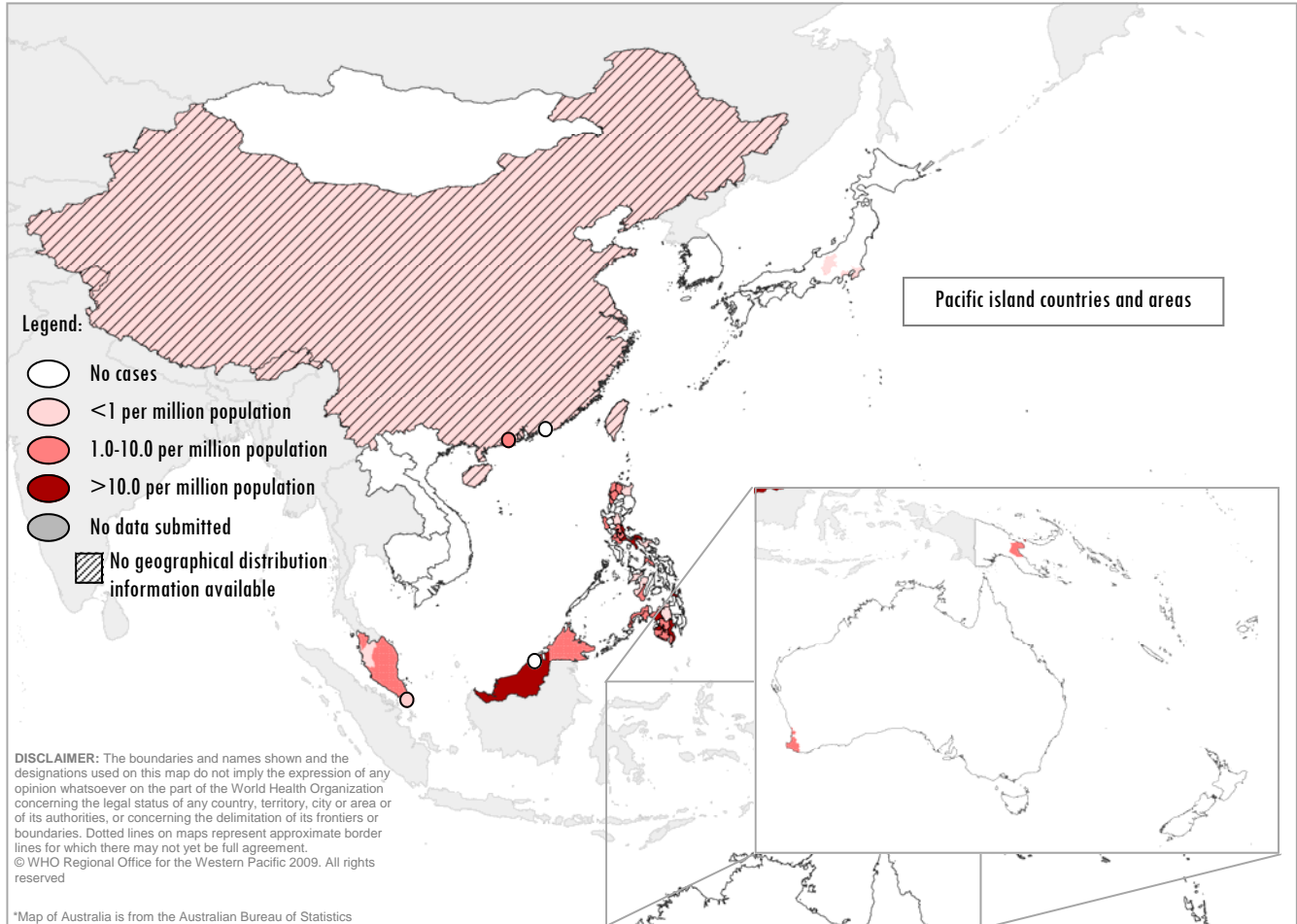


MEASLES-RUBELLA

Bulletin

Figure 1. Incidence rate of total (confirmed and compatible) measles cases with rash onset 1–31 July 2018, WHO Western Pacific Region



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

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

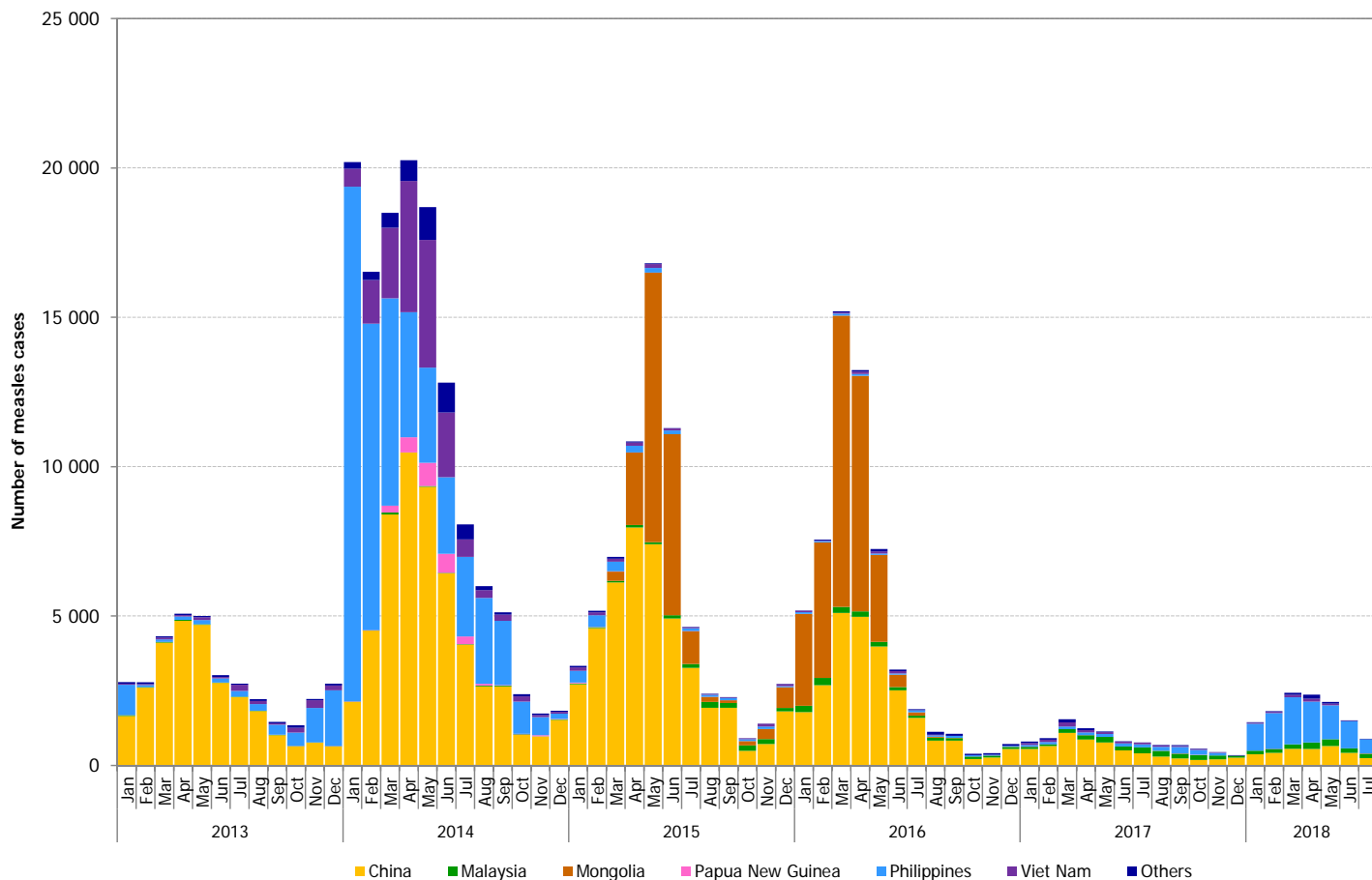
Country/area	2018											
	Feb		Mar		Apr		May		Jun		Jul	
	No. of confirmed	Total no. of cases	No. of confirmed	Total no. of cases	No. of confirmed	Total no. of cases	No. of confirmed	Total no. of cases	No. of confirmed	Total no. of cases	No. of confirmed	Total no. of cases
Australia ¹	2	2	30	30	10	10	4	4	2	2	5	5
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	407	418	550	557	537	547	634	647	405	414	210	240
China, Hong Kong SAR	0	0	3	3	4	4	2	2	1	1	0	0
China, Macao SAR	0	0	0	0	0	0	1	1	0	0	1	1
Japan	7	7	20	20	98	103	45	45	12	12	8	10
Lao People's Democratic Republic	0	0	0	0	1	1	1	1	0	0	0	0
Malaysia	130	137	151	154	209	220	208	226	151	159	134	158
Mongolia	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand	5	5	4	4	15	15	1	1	0	0	0	0
Papua New Guinea	3	3	0	0	0	0	0	0	0	0	3	3
Philippines	454	1198	553	1568	344	1365	173	1141	116	906	62	472
Republic of Korea	0	0	2	2	0	1	6	8	1	2	0	0
Singapore	3	3	6	6	7	7	5	5	0	0	2	3
Viet Nam	22	37	55	87	38	98	28	48	4	10	0	0
Pacific island countries and areas	0	0	0	0	0	0	0	0	0	0	0	0
Western Pacific Region	1033	1810	1374	2431	1263	2371	1108	2129	692	1506	425	892

– No data

¹ Reports only confirmed cases

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

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



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

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

Country/area	Year verified	2016	2017					2018						
		% of cases with known source of infection	No. of confirmed cases	Source of infection				% of cases with known source of infection	No. of confirmed cases	Source of infection				% of cases with known source of infection
				Imported	Import-related	Endemic	Unknown / not reported			Imported	Import-related	Endemic	Unknown / not reported	
Australia	2014	49.5%	81	38	32	0	11	86.4%	56	33	16	0	7	87.5%
Brunei Darussalam	2015	100.0%	0	-	-	-	-	-	0	-	-	-	-	-
Cambodia	2015	0.0%	10	0	0	0	10	0.0%	0	-	-	-	-	-
China	-	0.0%	5 181	0	0	0	5 181	0.0%	3 106	0	0	0	3 106	0.0%
China, Hong Kong SAR	2016	11.1%	4	3	0	0	1	75.0%	10	4	0	0	6	40.0%
China, Macao SAR	2014	-	2	0	2	0	0	100.0%	2	2	0	0	0	100.0%
Japan	2015	81.6%	183	34	136	0	13	92.9%	191	21	155	0	15	92.1%
Lao People's Democratic Republic	-	0.0%	3	0	0	0	3	0.0%	7	0	0	0	7	0.0%
Malaysia	-	95.6%	1 683	5	0	1 110	568	66.3%	1 097	4	0	789	304	72.3%
Mongolia	-	100.0%	9	0	0	9	0	100.0%	0	-	-	-	-	-
New Zealand	2017	0.0%	14	0	0	0	14	0.0%	26	0	0	0	26	0.0%
Papua New Guinea	-	-	7	0	0	0	7	0.0%	6	0	0	0	6	0.0%
Philippines	-	28.4%	251	0	0	43	208	17.1%	2 093	58	10	1 209	816	61.0%
Republic of Korea	2014	100.0%	5	3	0	0	2	60.0%	11	3	2	0	6	45.5%
Singapore	-	75.7%	68	20	22	0	26	61.8%	27	7	0	0	20	25.9%
Viet Nam	-	0.0%	100	0	0	0	100	0.0%	163	0	0	0	163	0.0%
Pacific island countries and areas	-	0.0%	1	0	0	0	1	0.0%	0	-	-	-	-	-
Total		18.2%	7 602	103	192	1 162	6 145	19.2%	6 795	132	183	1 998	4 482	34.0%

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

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

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

Country/area	2014		2015		2016		2017		2018										Rash onset of last confirmed measles case	
	Total confirmed and compatible ¹	Measles incidence per 1 million pop.	Total confirmed and compatible ¹	Measles incidence per 1 million pop.	Total confirmed and compatible ¹	Measles incidence per 1 million pop.	Total confirmed and compatible ¹	Measles incidence per 1 million pop.	Population (in millions) ²	Suspected measles cases	Pending classification	Discarded cases ³	Confirmed and compatible measles cases					Deaths due to measles		
													Compatible cases	Lab	Epi-linked	Total confirmed and compatible	Annualized measles incidence per 1 million pop.			
Australia	340	14.5	74	3.1	99	4.1	81	3.3	24.8	56	0	0	0	56	0	0	56	3.9	0	23-Jul-18
Brunei Darussalam	0	0.0	4	9.6	1	2.4	0	0.0	0.4	14	0	14	0	0	0	0	0	0.0	0	7-Aug-16
Cambodia	0	0.0	18 372	1183.9	56	3.6	10	0.6	16.2	598	35	563	0	0	0	0	0	0.0	0	8-Jun-17
China	52 485	37.8	42 864	30.7	24 839	17.7	5 993	4.3	1415.0	21 435	540	15 576	89	3 077	29	3 195	3.9	1	31-Jul-18	
China, Hong Kong SAR	50	6.9	18	2.5	9	1.2	4	0.5	7.4	20	0	10	0	10	0	10	2.3	0	15-Jun-18	
China, Macao SAR	1	1.7	0	0.0	0	0.0	2	3.2	0.6	20	0	18	0	2	0	2	5.4	0	28-Jul-18	
Japan	454	3.5	35	0.3	157	1.2	187	1.5	127.2	1 237	40	999	7	191	0	198	2.7	0	21-Jul-18	
Lao People's Democratic Republic	70	10.6	56	8.4	8	1.2	3	0.4	7.0	500	145	348	0	2	5	7	1.7	0	11-May-18	
Malaysia	222	7.3	1 318	42.9	1 587	50.9	1 693	53.5	32.0	6 142	638	4 330	77	1 072	25	1 174	62.8	0	29-Jul-18	
Mongolia	0	0.0	20 374	6844.1	28 813	9517.4	9	2.9	3.1	188	71	117	0	0	0	0	0.0	0	5-May-17	
New Zealand	274	60.0	13	2.8	104	22.3	15	3.2	4.7	38	5	7	0	25	1	26	9.4	0	7-May-18	
Papua New Guinea	2 589	333.8	53	6.7	0	0.0	7	0.8	8.4	44	0	38	0	6	0	6	1.2	0	3-Jul-18	
Philippines	54 669	546.1	2 003	19.7	641	6.2	1 224	11.7	106.5	12 346	4 121	638	5 494	1 679	414	7 587	122.1	30	24-Jul-18	
Republic of Korea	442	8.8	7	0.1	18	0.4	7	0.1	51.2	480	2	463	4	11	0	15	0.5	0	2-Jun-18	
Singapore	171	31.4	45	8.1	157	27.9	81	14.2	5.8	85	0	57	1	27	0	28	8.3	0	27-May-18	
Viet Nam	16 741	180.9	884	9.4	368	3.9	588	6.2	96.5	967	213	440	152	163	0	315	5.6	0	5-Jul-18	
Pacific island countries and areas ⁴	279	87.9	20	6.2	6	1.8	1	0.3	3.3	55	0	55	0	0	0	0	0.0	0	1-May-17	
<i>Fiji</i>	1	1.1	1	1.1	5	5.6	1	1.1	0.9	55	0	55	0	0	0	0	0.0	0	1-May-17	
<i>Federated States of Micronesia</i>	257	2470.8	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	26-Aug-14	
<i>Guam</i>	1	6.2	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	14-Mar-14	
<i>Solomon Islands</i>	15	26.1	-	-	1	1.7	0	0.0	0.6	-	-	-	-	-	-	-	-	-	21-Jan-16	
<i>Vanuatu</i>	5	19.3	19	71.8	0	0.0	-	-	0.3	-	-	-	-	-	-	-	-	-	23-Sep-15	
Western Pacific Region	128 786	68.9	67 768	36.0	56 868	30.1	9 905	5.2	1910.3	44 225	5 810	23 673	5 824	6 321	474	12 619	11.3	31		

¹ Includes compatible, laboratory confirmed and epi-linked confirmed cases

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

³ Australia reports confirmed cases only.

⁴ Classification is provisional based on laboratory data only.

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

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

Country/area	2017				2018			
	Discarded non-measles rate per 100 000 pop	Second level units with ≥ 2 discarded cases per 100 000 pop [annualized] ¹	Suspected cases with adequate investigation	Suspected cases with adequate specimens for laboratory confirmation ²	Annualized discarded non-measles rate per 100 000 pop	Second level units with ≥ 2 discarded cases per 100 000 pop [annualized] ¹	Suspected cases with adequate investigation	Suspected cases with adequate specimens for laboratory confirmation ²
	≥ 2	$\geq 80\%$	$\geq 80\%$	$\geq 80\%$	≥ 2	$\geq 80\%$	$\geq 80\%$	$\geq 80\%$
Australia ³	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data	Insufficient data
Brunei Darussalam	4.2	Not applicable	100.0%	100.0%	5.5	Not applicable	100.0%	100.0%
Cambodia	5.4	80.0%	81.9%	78.8%	5.9	72.0%	79.8%	99.7%
China	2.1	64.5%	97.8%	91.5%	1.9	38.7%	97.6%	91.6%
China, Hong Kong SAR	0.1	Not applicable	100.0%	100.0%	0.0	Not applicable	100.0%	90.0%
China, Macao SAR	2.6	Not applicable	83.3%	100.0%	4.9	Not applicable	65.0%	100.0%
Japan	0.4	0.0%	Insufficient data	Insufficient data	1.3	2.1%	Insufficient data	Insufficient data
Lao People's Democratic Republic	7.1	64.7%	82.1%	85.1%	8.6	76.5%	82.2%	84.8%
Malaysia	20.7	93.8%	83.8%	90.7%	23.2	87.5%	89.7%	87.6%
Mongolia	4.7	13.6%	88.3%	93.5%	6.4	31.8%	98.4%	95.2%
New Zealand	0.4	Insufficient data	Insufficient data	Insufficient data	0.3	Insufficient data	Insufficient data	Insufficient data
Papua New Guinea	0.5	10.0%	70.6%	84.3%	0.8	5.0%	75.0%	90.9%
Philippines	1.9	29.4%	46.0%	69.3%	1.0	22.2%	61.6%	56.0%
Republic of Korea	0.5	0.0%	71.2%	84.9%	1.6	6.3%	75.6%	96.5%
Singapore	1.4	Not applicable	65.8%	67.1%	1.7	Not applicable	89.4%	88.2%
Viet Nam	1.5	49.2%	55.5%	72.3%	0.8	14.3%	80.0%	78.8%
Pacific island countries and areas ⁴	2.8	4.3%	87.5%	82.3%	2.8	5.0%	83.6%	83.6%
Western Pacific Region	2.2	36.4%	89.8%	89.1%	10.3	27.5%	85.2%	82.9%

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

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

³ Reports only confirmed cases

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

Green	Reached or surpassed target
Yellow	Nearly reached target: 1.00–1.99 for non-measles suspected case rate; 10.1–25% for percent clinically confirmed cases; 60–79% for other indicators
Red	Substantially below target

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

Country/area	2014		2015		2016		2017		2018										
	Total confirmed and compatible	Rubella incidence per 1 million pop.	Total confirmed and compatible	Rubella incidence per 1 million pop.	Total confirmed and compatible	Rubella incidence per 1 million pop.	Total confirmed and compatible	Rubella incidence per 1 million pop.	Population (in millions) ¹	Investigated for rubella	Pending classification	Discarded cases	Confirmed and compatible rubella cases					Congenital rubella syndrome	
													Compatible cases	Lab	Epi-linked	Total confirmed and compatible	Annualized rubella incidence per 1 million pop.		
Australia	-	-	-	-	-	-	-	-	24.77	-	-	-	-	-	-	-	-	-	-
Brunei Darussalam	0	0.0	0	0.0	0	0.0	0	0.0	0.43	14	0	14	0	0	0	0	0.0	-	
Cambodia	31	2.0	18	1.2	4	0.3	7	0.4	16.25	598	35	563	0	0	0	0	0.0	-	
China	11 887	8.6	8 245	5.9	4 476	3.2	1 601	1.1	1 415.05	21 435	540	15 576	142	1 935	47	2 124	2.6	-	
China, Hong Kong SAR	1	0.1	12	1.7	3	0.4	1	0.1	7.43	5	0	0	2	3	0	5	1.2	-	
China, Macao SAR	0	0.0	2	3.3	1	1.6	0	0.0	0.63	19	0	19	0	0	0	0	0.0	-	
Japan	-	-	2	0.0	3	0.0	5	0.0	127.19	200	0	195	0	5	0	5	0.1	-	
Lao People's Democratic Republic	18	2.7	24	3.6	40	5.9	12	1.7	6.96	500	146	346	0	7	1	8	2.0	-	
Malaysia	226	7.5	34	1.1	68	2.2	115	3.6	32.04	6 195	638	5 475	0	82	0	82	4.4	-	
Mongolia	0	0.0	28	9.4	27	8.9	13	4.2	3.12	188	70	118	0	0	0	0	0.0	-	
New Zealand	-	-	-	-	-	-	-	-	4.75	0	-	-	-	-	-	-	-	-	
Papua New Guinea	-	-	4	0.5	2	0.2	1	0.1	8.42	44	0	43	0	1	0	1	0.2	-	
Philippines	343	3.4	154	1.5	165	1.6	448	4.3	106.51	12 346	4 121	8 143	0	82	0	82	1.3	-	
Republic of Korea	2	0.0	2	0.0	3	0.1	2	0.0	51.16	491	3	487	0	1	0	1	0.03	-	
Singapore	0	0.0	1	0.2	0	0.0	3	0.5	5.79	30	0	28	0	2	0	2	0.6	-	
Viet Nam	50	0.5	972	10.4	350	3.7	126	1.3	96.49	843	306	490	28	19	0	47	0.8	-	
Pacific island countries and areas ²	4	1.3	1	0.3	1	0.3	4	1.2	3.32	55	0	55	0	0	0	0	0.0	-	
<i>Fiji</i>	4	4.5	1	1.1	1	1.1	4	4.4	0.91	55	0	55	0	0	0	0	0.0	-	
<i>Solomon Islands</i>	-	-	-	-	-	-	0	0.0	0.62	0	-	-	-	-	-	-	-	-	
<i>Vanuatu</i>	0	0.0	0	0.0	0	0.0	-	-	0.28	0	-	-	-	-	-	-	-	-	
Western Pacific Region	675	0.4	1 253	0.7	667	0.4	2 338	1.2	1910.32	42 963	5 859	31 552	172	2 137	48	2 357	2.1	-	

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

² Classification is provisional based on laboratory data only.

“-” No data

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

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

Country/area	Laboratory	Measles and rubella			Measles													Rubella				
					Serology						Virus detection							Serum and blood (includes DBS)				
		Total number of samples received	Total number of samples tested	Total number of cases tested	Serum			Blood		% of samples with results ≤4 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			
					Samples tested for measles IgM	Measles IgM (+)	Measles IgM equiv	DBS samples	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	84	84	69	13	7	53.8	1	8%	0	-	84.6	1	0	73	71	68	1	0	-	0	-
Brunei Darussalam	DLS	20	20	20	20	0	0.0	2	10%	0	-	100.0	0	-	0	-	0	20	0	0.0	0	0%
Cambodia	NIPH	929	929	929	774	10	1.3	0	0%	155	0	80.6	0	-	0	-	10	928	5	0.5	0	0%
China	CCDC	-	-	-	-	-	-	-	-	-	-	91.2	-	-	-	-	-	-	-	-	-	-
China, Hong Kong SAR	PHLC	289	289	242	248	4	1.6	5	2%	0	-	94.0	7	3	43	9	5	239	0	0.0	2	1%
China, Macao SAR	PHL	65	65	65	65	3	4.6	4	6%	0	-	100.0	0	-	6	2	3	65	0	0.0	1	2%
Japan	NIID	1 120	1 120	601	157	44	28.0	22	14%	0	-	-	0	-	516	173	183	8	0	-	0	0%
Lao People's Democratic Republic	NCLE	409	409	409	409	2	0.5	9	2%	0	-	81.6	0	-	0	-	2	409	12	2.9	14	3%
Malaysia	NPHL	11 946	11 946	9 069	8 672	1 874	21.6	223	3%	0	-	95.5	1 807	129	0	-	1 922	6 479	186	2.9	176	3%
Mongolia	NCCD	640	640	640	634	3	0.5	13	2%	0	-	100.0	0	-	6	0	3	611	7	1.1	29	5%
New Zealand	CHL	325	325	299	123	4	3.3	9	7%	0	-	98.4	0	-	181	10	10	121	0	0.0	1	1%
Papua New Guinea	CPHL	51	51	51	49	7	14.3	0	0%	0	-	80.4	0	-	0	-	6	45	1	2.2	2	4%
Philippines	RITM	2 964	2 964	2 948	2 873	188	6.5	27	1%	70	10	97.2	172	6	221	30	220	2 862	313	10.9	129	5%
Republic of Korea	KCDC	529	529	448	350	39	11.1	22	6%	0	-	77.3	0	-	149	2	39	197	33	16.8	27	14%
Singapore	NPHL	549	549	565	102	11	10.8	0	0%	0	-	100.0	45	20	458	52	62	96	12	12.5	0	0%
Viet Nam national lab (Northern)	NIHE	620	620	620	611	15	2.5	6	1%	0	-	97.9	8	1	9	0	16	611	18	2.9	36	6%
Viet Nam national lab (Southern)	PI	366	366	342	333	10	3.0	5	2%	0	-	88.9	33	0	33	0	10	333	52	15.6	20	6%
Viet Nam subnational lab (Central)	PI	214	214	214	213	0	-	2	1%	0	-	37.6	0	-	1	0	0	213	3	-	2	1%
Viet Nam subnational lab (Highland)	IHE	65	65	65	65	0	-	0	0%	0	-	33.8	0	-	0	-	0	65	0	0.0	0	0%
Fiji	FCCDC	93	93	93	85	1	1.2	0	0%	4	0	-	0	-	0	-	1	88	4	4.5	2	2%
Total		21 278	21 278	17 689	15 796	2 222	14.1	350	2%	229	10	93.4	2 073	159	1 696	349	2 560	13 391	646	4.8	441	3%

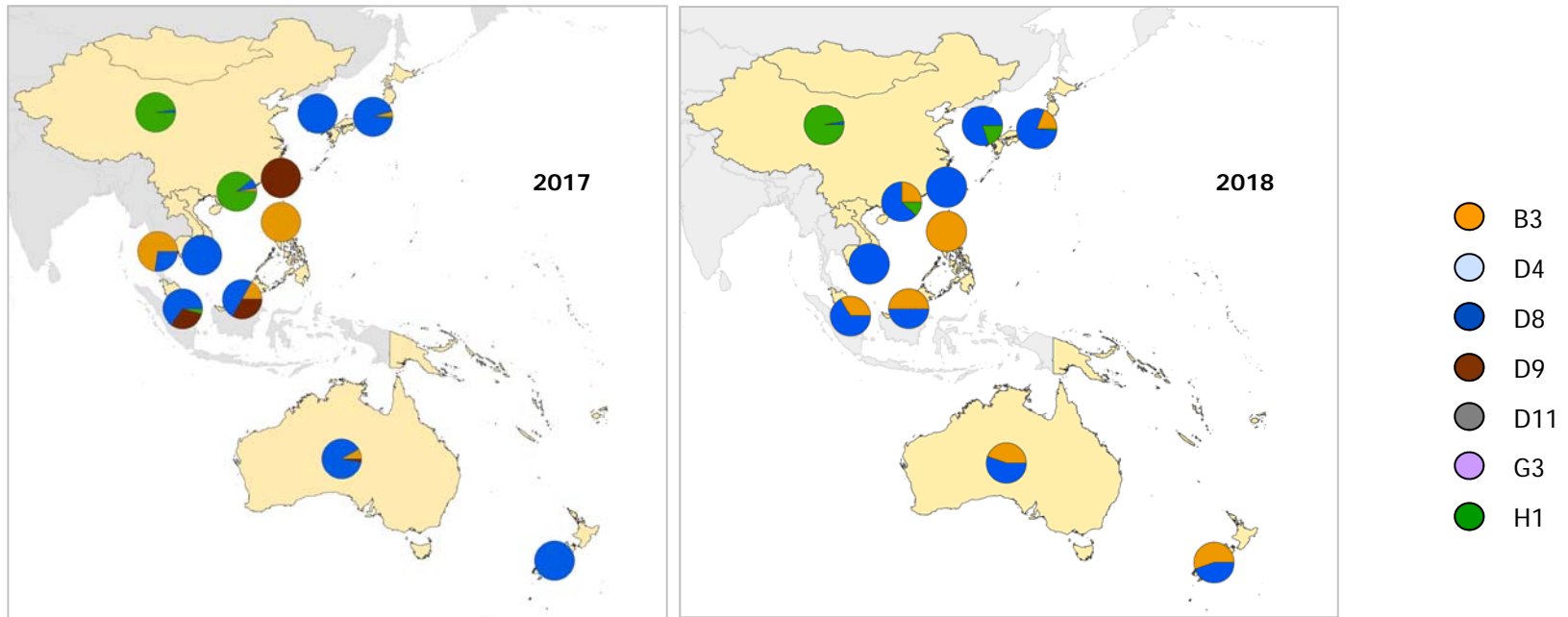
"-" No data

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

Country/area	Laboratory	Measles and rubella			Measles													Rubella					
					Serology						Virus detection				Total number of lab confirmed cases	Serum and blood (includes DBS)							
		Serum			Blood		% of samples with results ≤4 days	Measles Virus isolation/detection (swab, urine and others)		Measles Reverse Transcription-Polymerase Chain Reaction		Samples tested for rubella IgM	Rubella IgM (+)			Rubella IgM equiv							
		No.	No.	%	No.	%		No. received	No. (+)	No. of samples tested	No. of isolates		No. of samples tested	No. (+)		No.	No.	%	No.	%			
Australia	VIDRL	54	54	41	9	9	100.0	0	0%	0	-	66.7	0	-	45	45	41	0	-	-	-	-	-
Brunei Darussalam	DLS	14	14	14	14	0	0.0	0	0%	0	-	100.0	0	-	0	-	0	14	0	0%	0	0	0%
Cambodia	NIPH	563	563	563	487	0	0.0	0	0%	76	0	59.2	0	-	0	-	0	559	0	0%	0	0	0%
China	CCDC	-	-	-	-	-	-	-	-	-	-	91.2	-	-	-	-	-	-	-	-	-	-	-
China, Hong Kong SAR	PHLC	355	355	286	265	10	3.8	4	2%	0	-	89.6	5	1	88	10	14	235	5	2%	4	4	2%
China, Macao SAR	PHL	99	99	99	99	3	3.0	3	3%	0	-	100.0	0	-	4	1	3	98	7	7%	0	0	0%
Japan	NIID	2 006	1 790	1 021	224	25	11.2	25	11%	0	-	-	0	-	747	186	197	4	1	-	0	0	-
Lao People's Democratic Republic	NCLE	373	373	373	348	2	0.6	4	1%	0	-	95.4	0	-	0	-	2	345	7	2%	23	23	7%
Malaysia	NPHL	9 511	9 511	6 728	6 422	1 238	19.3	183	3%	0	-	94.4	1 469	103	0	-	1 266	4 237	178	4%	116	116	3%
Mongolia	NCCD	167	167	167	167	0	0.0	0	0%	0	-	100.0	0	-	0	-	0	166	1	1%	0	0	0%
New Zealand	CHL	295	295	250	66	10	15.2	1	2%	0	-	95.3	1	0	213	24	27	30	0	0%	3	3	10%
Papua New Guinea	CPHL	51	51	51	51	7	13.7	0	0%	0	-	76.5	0	-	0	-	7	51	1	2%	0	0	0%
Philippines	RITM	7 965	6 113	5 320	4 748	1 226	25.8	41	1%	68	8	14.6	1 014	206	1 011	768	1 871	4 241	75	2%	37	37	1%
Republic of Korea	KCDC	522	522	401	362	39	10.8	36	10%	0	-	59.9	6	1	213	26	59	224	32	14%	31	31	14%
Singapore	NPHL	377	377	372	29	4	13.8	0	0%	0	-	100.0	25	6	352	29	39	26	2	8%	0	0	0%
Viet Nam national lab (Northern)	NIHE	552	552	500	379	154	40.6	15	4%	0	-	98.7	171	0	179	129	247	378	30	8%	23	23	6%
Viet Nam national lab (Southern)	PI	157	157	150	141	5	3.5	0	0%	0	-	95.0	16	0	16	0	5	141	11	8%	5	5	4%
Viet Nam subnational lab (Central)	PI	176	176	176	173	5	2.9	1	1%	0	-	52.3	0	-	3	0	5	173	2	1%	0	0	0%
Viet Nam subnational lab (Highland)	IHE	21	21	21	21	0	0.0	0	0%	0	-	9.5	0	-	0	-	0	21	0	0%	0	0	0%
Fiji	FCCDC	58	53	53	46	0	0.0	0	0%	7	0	No data	0	-	0	-	0	51	0	0%	2	2	4%
Total		23 316	21 243	16 586	14 051	2 737	19.5	313	2%	151	8	76.2	2 707	317	2 871	1 218	3 783	10 994	352	3%	244	244	2%

"-" No data

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



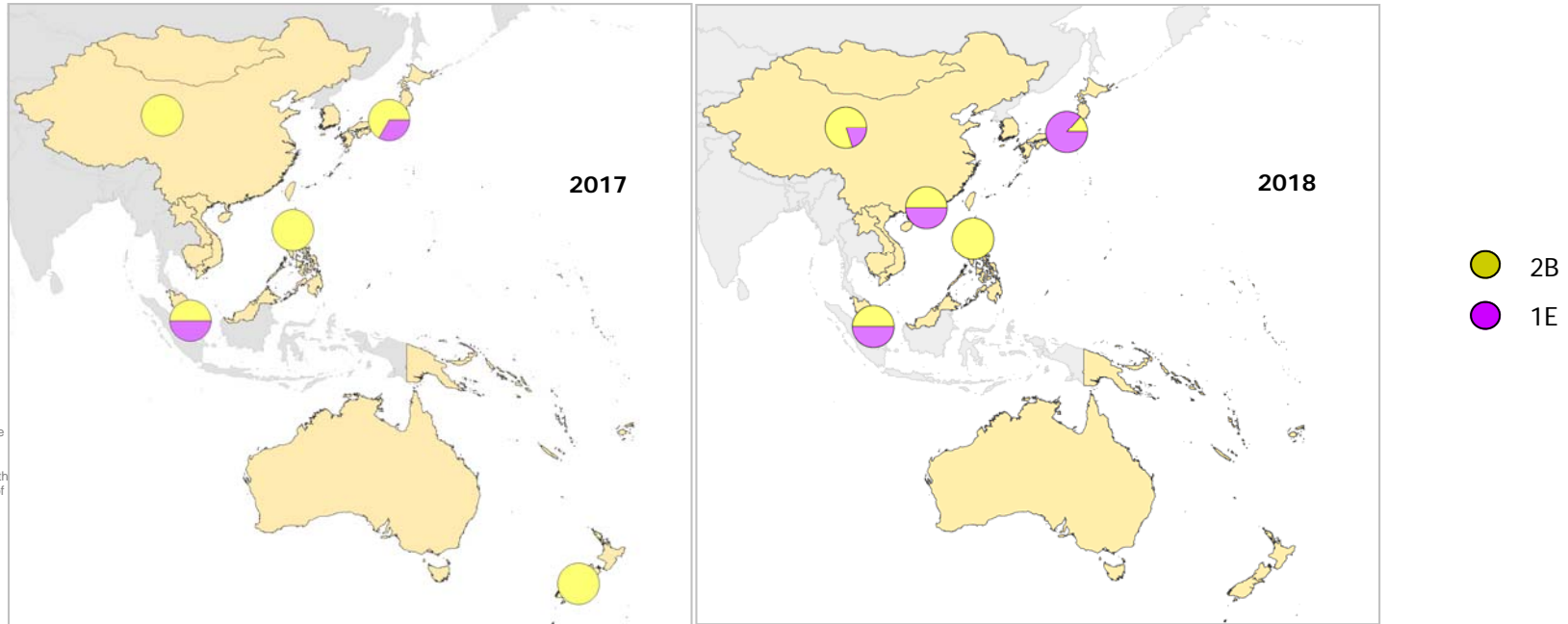
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Table 7. Measles genotype distribution of cases with rash onset in August 2017 to July 2018, WHO Western Pacific Region

Country/area	2017																2018																																			
	Aug				Sep				Oct				Nov				Dec				Jan				Feb				Mar				Apr				May				Jun				Jul							
	B3	D8	D9	H1	B3	D8	D9	H1	B3	D8	D9	H1	B3	D8	D9	H1	B3	D8	D9	H1	B3	D8	D9	H1	B3	D8	D9	H1	B3	D8	D9	H1	B3	D8	D9	H1	B3	D8	D9	H1	B3	D8	D9	H1								
Australia	2	1			2	2			1	10			4	2			1				1	3			1				11	6			2	8			1	2			1	2										
Brunei Darussalam																																																				
Cambodia																																																				
China				20				16	2	8	1	5				11				14				26	3	64	1	28	1	30				4																		
China, Hong Kong SAR					1																				1	1		2	1	2				1																		
China, Macao SAR																																																				
Japan	8								8												7	8		2	4			9		11		1	15		1	4	1	2	3													
Lao People's Democratic Republic																																																				
Malaysia																					5	8		1		1		5	2	8	5	8																				
Mongolia																																																				
New Zealand																		1				4			2	2		7	1	1																						
Papua New Guinea																																																				
Philippines	2				1				1				2				17								6		16		32	4																						
Republic of Korea																						1						2		5				2					2													
Singapore	1				3	1			2				1				5	1			1	4		2			2	2	1	3	1	2			1		2															
Viet Nam									3				9															4		38		15			17						3											
Pacific island countries and areas																																																				

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

Figure 4. Rubella genotype distribution of cases with rash onset in 2017 and 2018, 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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Table 8. Rubella genotype distribution of cases with rash onset in August 2017 to July 2018, WHO Western Pacific Region

Country/area	2017																					2018														
	Aug			Sep			Oct			Nov			Dec			Jan			Feb			Mar			Apr			May			Jun			Jul		
	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															1				1	1			7			7	4		13	3		3				
China, Hong Kong SAR																																				
China, Macao SAR																																				
Japan									1						1										2			1	4			5			10	
Lao People's Democratic Republic																																				
Malaysia																																				
Mongolia																																				
New Zealand																																				
Papua New Guinea																																				
Philippines																									1		1									
Republic of Korea																																				
Singapore																																				
Viet Nam																																				
Pacific island countries and areas																																				

Sources: Includes all cases reported to the Western Pacific Regional Office by 20 August 2018 and the Rubella Nucleotide Surveillance online database (RubeNS).

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

Country	2017		2018 ¹								Completeness ²	Timeliness ³
	Completeness ²	Timeliness ³	Jan	Feb	Mar	Apr	May	Jun	Jul			
Australia	100%	100%	08 Feb	08 Mar	10 Apr	16 May	12 Jun	09 Jul	07 Aug	86%	86%	
Brunei Darussalam	100%	100%	07 Feb	06 Mar	07 Apr	07 May	05 Jun	07 Jul	06 Aug	86%	100%	
Cambodia	100%	100%	10 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	86%	100%	
China	100%	75%	13 Feb	12 Mar	15 Apr	16 May	05 Jul	12 Jul	13 Aug	86%	86%	
China, Hong Kong SAR	100%	100%	06 Feb	06 Mar	09 Apr	07 May	06 Jun	09 Jul	06 Aug	86%	100%	
China, Macao SAR	100%	100%	08 Feb	08 Mar	04 Apr	07 May	06 Jun	09 Jul	07 Aug	86%	100%	
Japan	100%	92%	09 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	08 Aug	86%	100%	
Lao People's Democratic Republic	100%	100%	10 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	86%	100%	
Malaysia	100%	100%	08 Feb	09 Mar	06 Apr	10 May	10 Jun	10 Jul	09 Aug	86%	100%	
Mongolia	100%	100%	10 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	86%	100%	
New Zealand	100%	100%	08 Feb	07 Mar	10 Apr	08 May	06 Jun	05 Jul	06 Aug	86%	100%	
Papua New Guinea	100%	92%	-	14 Mar	17 Apr	10 May	08 Jun	17 Jul	-	71%	29%	
Philippines	58%	25%	02 Mar	-	27 Apr	22 May	21 Jun	24 Jul	17 Aug	71%	0%	
Republic of Korea	100%	92%	08 Feb	10 Mar	10 Apr	10 May	10 Jun	13 Jul	09 Aug	86%	86%	
Singapore	100%	92%	08 Feb	10 Mar	07 Apr	10 May	07 Jun	07 Jul	10 Aug	86%	100%	
Viet Nam	100%	92%	09 Feb	09 Mar	10 Apr	09 May	08 Jun	09 Jul	10 Aug	86%	100%	
Pacific island countries and areas	100%	67%	16 Feb	10 Mar	07 Apr	14 May	08 Jun	13 Jul	13 Aug	86%	86%	
Completeness	98%		94%	94%	100%	100%	100%	100%	94%	84%		
Timeliness		92%	82%	88%	88%	88%	88%	82%	88%		87%	

¹ National measles surveillance monthly reports from July 2018.

Legend: black = timely report; red = untimely report

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

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

Country/area	2017		2018 ¹										Genotype results by source of data			
	Completeness ²	Timeliness ³	Jan	Feb	Mar	Apr	May	Jun	Jul	Completeness ²	Timeliness ³	Measles		Rubella		
												MeaNS	Submission to WPRO	Rubens	Submission to WPRO	
Australia	100%	100%	07 Feb	01 Mar	04 Apr	04 May	07 Jun	06 Jul	08 Aug	100%	100%	40	38	0	0	
Brunei Darussalam	100%	100%	05 Feb	01 Mar	31 Mar	07 May	30 May	30 Jun	01 Aug	100%	100%	0	0	0	0	
Cambodia	100%	100%	10 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	100%	100%	0	0	0	0	
China	100%	100%	06 Feb	06 Mar	02 Apr	02 May	05 Jun	02 Jul	06 Aug	100%	100%	97	171	20	40	
China, Hong Kong SAR	100%	100%	06 Feb	06 Mar	10 Apr	07 May	07 Jun	09 Jul	06 Aug	100%	100%	8	8	2	2	
China, Macao SAR	100%	100%	08 Feb	09 Mar	06 Apr	08 May	10 Jun	06 Jul	08 Aug	100%	100%	1	1	0	0	
Japan	100%	92%	09 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	08 Aug	100%	100%	50	68	22	0	
Lao People's Democratic Republic	100%	100%	10 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	100%	100%	0	0	0	0	
Malaysia	100%	100%	09 Feb	09 Mar	11 Apr	14 May	02 Jul	10 Jul	09 Aug	100%	71%	48	0	0	0	
Mongolia	100%	83%	10 Feb	10 Mar	10 Apr	10 May	10 Jun	10 Jul	10 Aug	100%	100%	0	0	0	0	
New Zealand	100%	100%	08 Feb	07 Mar	10 Apr	08 May	05 Jun	05 Jul	06 Aug	100%	100%	18	18	0	0	
Papua New Guinea	100%	67%	08 Feb	10 Mar	04 Apr	10 May	08 Jun	04 Jul	09 Aug	100%	100%	0	0	0	0	
Philippines	100%	92%	10 Feb	10 Mar	10 Apr	09 May	13 Jun	10 Jul	10 Aug	100%	86%	59	59	3	3	
Republic of Korea	100%	100%	09 Feb	09 Mar	10 Apr	10 May	08 Jun	10 Jul	10 Aug	100%	100%	8	10	0	0	
Singapore	100%	100%	08 Feb	10 Mar	07 Apr	10 May	07 Jun	07 Jul	10 Aug	100%	100%	18	21	2	1	
Viet Nam national lab (Northern)	100%	100%	09 Feb	05 Mar	09 Apr	09 May	06 Jun	10 Jul	07 Aug	100%	100%	77	16	0	0	
Viet Nam national lab (Southern)	100%	100%	08 Feb	08 Mar	09 Apr	09 May	10 Jun	09 Jul	08 Aug	100%	100%	0	0	0	0	
Viet Nam subnational lab (Central)	100%	100%	09 Feb	05 Mar	09 Apr	09 May	06 Jun	10 Jul	07 Aug	100%	100%	0	0	0	0	
Viet Nam subnational lab (Highland)	100%	100%	09 Feb	05 Mar	09 Apr	09 May	06 Jun	10 Jul	07 Aug	100%	100%	0	0	0	0	
Fiji	100%	75%	16 Feb	16 Mar	07 Apr	14 May	08 Jun	13 Jul	13 Aug	100%	71%	0	0	0	0	
Completeness	100%		100%	100%	100%	100%	100%	100%	100%	100%		424	410	49	46	
Timeliness		95%	95%	95%	100%	95%	90%	100%	100%		96%					

¹ National measles laboratory monthly reports from July 2018.

² 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.

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

**Expanded Programme on Immunization
Regional Office for the Western Pacific
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Please send your comments and monthly data before the 10th of the month to:
WPROEPIdata@who.int
*More detailed information available in the
Regional and country profile of measles elimination*