

HIGHLIGHTS

The Meeting of the Global Commission for the Certification of Poliomyelitis Eradication (GCC)

On 26-27 February 2019, the Global Commission for Certification of Poliomyelitis Eradication (GCC) met in Geneva, Switzerland, to review the progress toward wild poliovirus (WPV) eradication and poliovirus containment and to consider the appraisal of options with respect to WPV certification with or without consideration of verification/certification of circulation of vaccine-derived poliovirus (VDPV). The GCC concluded that:

- deeper analysis of WPV1 epidemiology was helpful and should continue;
- polio surveillance in priority countries and areas significantly improved since the last meeting in October 2018; and
- the number and duration of cVDPV outbreaks is a concern.

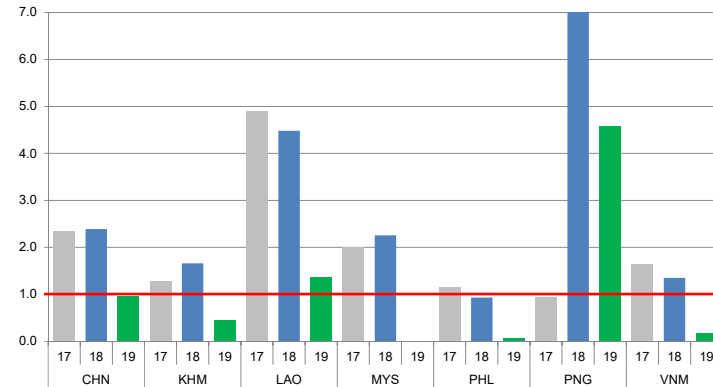
The GCC, noting that new modelling work and updated regional and laboratory data reinforced the previous GCC conclusion that WPV3 has been eradicated, reaffirmed its decision to undertake sequential certification of WPV3 in order to once again demonstrate that eradication of all polioviruses is achievable as a motivator.



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Chart 1. Non-polio AFP rate (per 100 000 persons < 15 years of age), 2017–2019*



* AFP rate annualized as of week 10

Chart 2. Adequate specimen collection rate, 2017–2019

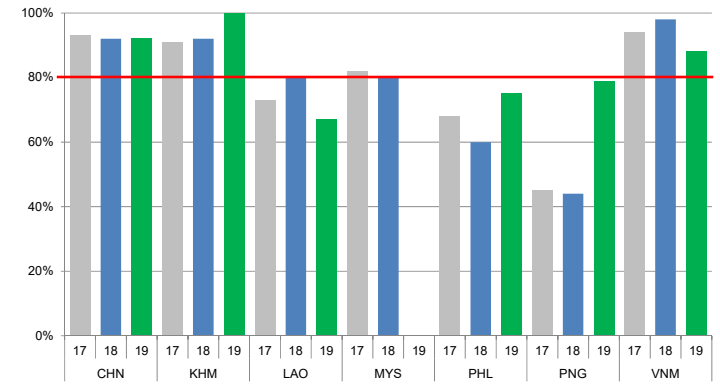


Chart 3. Percentage of reported AFP cases by number of polio vaccination doses, 2019

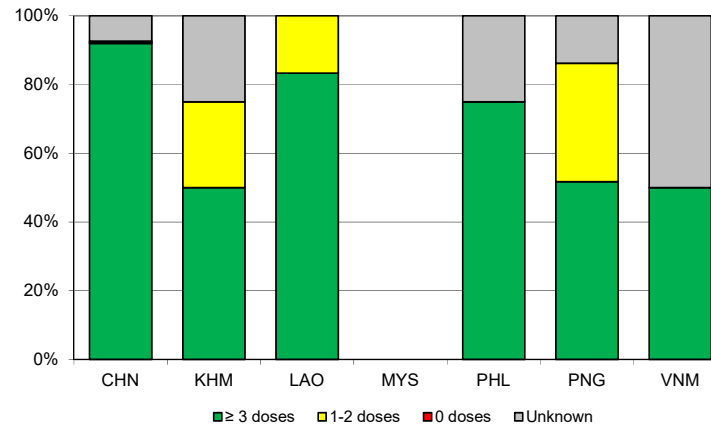
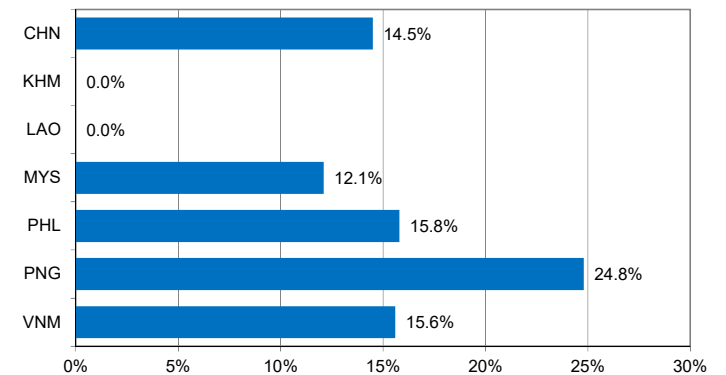


Chart 4. Percentage of reported AFP cases with pending classification > 90 days after onset, 2018



Note: Priority countries were selected for the charts. Official WHO acronyms have been used for abbreviation: CHN (China), KHM (Cambodia), LAO (Lao People's Democratic Republic), MYS (Malaysia), PHL (Philippines), PNG (Papua New Guinea), and VNM (Viet Nam).

Table 1A. Classification of AFP cases with onset in 2018 and key surveillance indicators

Country/area	2017		2018											
	Total reported cases	Annual expected cases <15 years of age	Total reported cases	Classification						Indicators			Latest report date ⁴	Days since last report ⁵
				Confirmed wild poliovirus	Vaccine-derived poliovirus (VDPV)	Polio-compatible	Discarded (Non-polio)	Pending		Non-polio AFP rate	% with adequate specimens ²	% investigated ≤ 2 days of notification ³		
								Total	> 90 days ¹ # (%)					
≥ 1	≥ 80%	≥ 80%	≤ 30											
Australia	60	46	57	0	0	3	54	0	0 (0.0%)	1.24	44%	89%	14-Feb-19	-
Brunei Darussalam	1	1	2	0	0	0	2	0	0 (0.0%)	2.00	100%	100%	24-Jan-19	-
Cambodia	57	44	73	0	0	0	72	1	0 (0.0%)	1.66	92%	85%	03-Jan-19	68
China	5278	2256	5397	0	1	0	4347	1049	784 (14.5%)	2.39	92%	100%	06-Mar-19	6
China, Hong Kong SAR	15	9	11	0	0	0	10	1	0 (0.0%)	1.22	82%	100%	21-Jan-19	50
China, Macao SAR	2	1	3	0	0	0	3	0	0 (0.0%)	3.00	100%	100%	19-Feb-19	-
Japan	-	161	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	103	21	94	0	0	0	84	10	0 (0.0%)	4.48	80%	79%	13-Feb-19	27
Malaysia	154	77	174	0	0	0	131	43	21 (12.1%)	2.26	80%	82%	23-Jan-19	48
Mongolia	6	9	6	0	0	0	6	0	0 (0.0%)	0.67	100%	83%	04-Feb-19	-
New Zealand	13	9	10	0	0	0	10	0	0 (0.0%)	1.11	60%	100%	28-Feb-19	-
Papua New Guinea	29	37	286	0	26	12	168	80	71 (24.8%)	7.03	44%	74%	23-Feb-19	17
Philippines	462	338	316	0	0	0	248	68	50 (15.8%)	0.93	60%	94%	31-Jan-19	40
Republic of Korea	68	67	70	0	0	0	70	0	0 (0.0%)	1.04	90%	100%	11-Mar-19	-
Singapore	7	6	13	0	0	0	13	0	0 (0.0%)	2.17	77%	100%	08-Mar-19	-
Viet Nam	385	234	315	0	0	0	235	80	49 (15.6%)	1.35	98%	86%	11-Jan-19	60
Pacific island countries and areas	16	11	13	0	0	0	1	12	9 (69.2%)	1.18	31%	100%	18-Feb-19	22
Total	6656	3327	6840	0	27	15	5454	1344	984 (14.4%)	2.05	88%	97%		

- Number (%) of reported cases pending classification more than 90 days from date of onset of paralysis to date of last report
- Percentage of reported cases with two stool specimens collected 24 hours apart and within 14 days of onset of paralysis
- Percentage of reported cases investigated within two days of notification
- Report date is fixed as soon as all cases for the year have been classified
- Countries are expected to submit data at least once per month to WPRO

	Reached or surpass target
	Nearly reached target 0.5-0.99 for non-polio AFP rate; 60-79% for other indicators
	Substantially below target

Table 1B. Classification of AFP cases with onset in 2019 and key surveillance indicators

Country/area	2018	2019												
	Total reported cases	Annual expected cases <15 years of age	Total reported cases	Classification						Indicators			Latest report date	Days since last report ⁵
				Confirmed wild poliovirus	Vaccine-derived poliovirus (VDPV)	Polio-compatible	Discarded (Non-polio)	Pending		Non-polio AFP rate ²	% with adequate specimens ³	% investigated ≤ 2 days of notification ⁴		
								Total	> 90 days ¹ # (%)					
≥ 1	≥ 80%	≥ 80%	≤ 30											
Australia	57	47	6	0	0	0	4	2	0 (0.0%)	0.66	50%	100%	14-Feb-19	26
Brunei Darussalam	2	1	1	0	0	0	0	1	0 (0.0%)	5.20	100%	100%	24-Jan-19	47
Cambodia	73	46	4	0	0	0	0	4	0 (0.0%)	0.45	100%	75%	12-Feb-19	28
China	5397	2256	421	0	0	0	12	409	0 (0.0%)	0.97	92%	100%	06-Mar-19	6
China, Hong Kong SAR	11	9	5	0	0	0	2	3	0 (0.0%)	2.89	100%	80%	04-Mar-19	8
China, Macao SAR	3	1	0	-	-	-	-	-	-	-	-	-	19-Feb-19	21
Japan	-	161	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	94	23	6	0	0	0	0	6	0 (0.0%)	1.36	67%	83%	13-Feb-19	27
Malaysia	174	78	0	-	-	-	-	-	-	-	-	-	23-Jan-19	48
Mongolia	6	9	2	0	0	0	0	2	0 (0.0%)	1.16	100%	100%	09-Mar-19	3
New Zealand	10	9	1	0	0	0	1	0	0 (0.0%)	0.58	100%	100%	28-Feb-19	12
Papua New Guinea	286	33	29	0	0	0	0	29	0 (0.0%)	4.57	79%	93%	08-Mar-19	4
Philippines	316	344	4	0	0	0	0	4	0 (0.0%)	0.06	75%	100%	11-Mar-19	1
Republic of Korea	70	66	4	0	0	0	0	4	0 (0.0%)	0.32	75%	100%	11-Mar-19	1
Singapore	13	6	1	0	0	0	1	0	0 (0.0%)	0.87	100%	100%	08-Mar-19	4
Viet Nam	315	234	8	0	0	0	0	8	1 (12.5%)	0.18	88%	100%	19-Feb-19	21
Pacific island countries and areas	13	11	1	0	0	0	0	1	0 (0.0%)	0.47	100%	100%	07-Feb-19	33
Total	6840	3334	493	0	0	0	20	473	1 (0.2%)	0.77	90%	99%		

- Number (%) of reported cases pending classification more than 90 days from date of onset of paralysis to date of last report
- Annualized non-polio AFP rate per 100 000 population under 15 years of age
- Percentage of reported cases with two stool specimens collected 24 hours apart and within 14 days of onset of paralysis
- Percentage of reported cases investigated within two days of notification
- Countries are expected to submit data at least once per month to WPRO

	Reached or surpass target
	Nearly reached target 0.5-0.99 for non-polio AFP rate; 60-79% for other indicators
	Substantially below target

Table 2A. Laboratory investigation of stool samples from AFP cases with onset in 2018 and key laboratory indicators

Country/area	Polio laboratory	Total no. of AFP cases with specimens	Results of virus isolation for AFP cases									Intratyptic differentiation/ Sequencing laboratory ¹	No. of isolates received	Results of intratyptic differentiation (ITD)/sequencing for virus isolates													
			L20B positive	L20B positive + NPEV	NPEV only	Negative	Pending ≤ 14 days	Pending > 14 days	% results reported ≤ 14 days	% specimens positive for NPEV	Latest report date			Type 1			Type 2			Type 3			NPEV ²	Pending ITD	Discordant pending sequencing	% ITD results reported ≤ 7 days of receipt	
														Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV					
Australia	VIDRL	44	1	0	1	42	0	0	91%	3%	05-Feb-19	VIDRL	1	0	0	0	0	0	0	0	0	0	1	0	0	0	100%
Brunei Darussalam	VIDRL	2	0	0	0	2	0	0	50%	0%	04-Feb-19	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cambodia	NIID	74	0	0	13	61	0	0	93%	15%	18-Jan-19	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China (total)		5329	37	0	378	4909	0	5	97%	6%	06-Mar-19		88	0	24	0	0	0	0	0	63	1	0	0	0	0	99%
China, Anhui	Prov. Lab	340	3	0	18	319	0	0	100%	5%		Prov. Lab/CCDC	8	0	3	0	0	0	0	0	5	0	0	0	0	0	100%
China, Beijing	Prov. Lab	31	0	0	0	31	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Chongqing	Prov. Lab	69	0	0	2	67	0	0	93%	2%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Fujian	Prov. Lab	179	1	0	12	166	0	0	97%	6%		Prov. Lab/CCDC	1	0	0	0	0	0	0	1	0	0	0	0	0	0	100%
China, Gansu	Prov. Lab	115	1	0	6	105	0	3	99%	4%		Prov. Lab/CCDC	2	0	0	0	0	0	0	2	0	0	0	0	0	0	100%
China, Guangdong	Prov. Lab	431	2	0	21	406	0	2	91%	4%		Prov. Lab/CCDC	4	0	0	0	0	0	0	4	0	0	0	0	0	0	100%
China, Guangxi	Prov. Lab	220	2	0	18	200	0	0	99%	8%		Prov. Lab/CCDC	4	0	3	0	0	0	0	1	0	0	0	0	0	0	100%
China, Guizhou	Prov. Lab	191	0	0	14	177	0	0	97%	7%		Prov. Lab/CCDC	2	0	2	0	0	0	0	0	0	0	0	0	0	0	100%
China, Hebei	Prov. Lab	299	1	0	38	260	0	0	100%	10%		Prov. Lab/CCDC	2	0	0	0	0	0	0	2	0	0	0	0	0	0	100%
China, Heilongjiang	Prov. Lab	91	0	0	4	87	0	0	100%	4%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Henan	Prov. Lab	557	5	0	57	495	0	0	99%	9%		Prov. Lab/CCDC	13	0	5	0	0	0	0	8	0	0	0	0	0	0	100%
China, Hubei	Prov. Lab	176	1	0	13	162	0	0	99%	7%		Prov. Lab/CCDC	4	0	2	0	0	0	0	2	0	0	0	0	0	0	100%
China, Hunan	Prov. Lab	246	0	0	25	221	0	0	99%	9%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Jiangsu	Prov. Lab	252	8	0	11	233	0	0	100%	4%		Prov. Lab/CCDC	16	0	2	0	0	0	0	13	1	0	0	0	0	0	100%
China, Jiangxi	Prov. Lab	176	1	0	12	163	0	0	97%	5%		Prov. Lab/CCDC	3	0	2	0	0	0	0	1	0	0	0	0	0	0	100%
China, Jilin	Prov. Lab	58	2	0	9	47	0	0	98%	11%		Prov. Lab/CCDC	8	0	4	0	0	0	0	4	0	0	0	0	0	0	100%
China, Neimongol	Prov. Lab	101	2	0	4	95	0	0	98%	3%		Prov. Lab/CCDC	4	0	1	0	0	0	0	3	0	0	0	0	0	0	100%
China, Ningxia	Prov. Lab	26	0	0	2	24	0	0	96%	6%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Shaanxi	Prov. Lab	99	1	0	2	96	0	0	84%	2%		Prov. Lab/CCDC	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0%
China, Shandong	Prov. Lab	414	2	0	27	385	0	0	100%	5%		Prov. Lab/CCDC	3	0	0	0	0	0	0	3	0	0	0	0	0	0	100%
China, Shanghai	Prov. Lab	42	0	0	0	42	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Shanxi	Prov. Lab	129	1	0	7	121	0	0	98%	4%		Prov. Lab/CCDC	2	0	0	0	0	0	0	2	0	0	0	0	0	0	100%
China, Sichuan	Prov. Lab	313	1	0	21	291	0	0	97%	6%		Prov. Lab/CCDC	1	0	0	0	0	0	0	1	0	0	0	0	0	0	100%
China, Tianjin	Prov. Lab	22	0	0	0	22	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Xinjiang	Prov. Lab	147	1	0	7	139	0	0	91%	4%		Prov. Lab/CCDC	2	0	0	0	0	0	0	2	0	0	0	0	0	0	100%
China, Yunnan	Prov. Lab	254	0	0	31	223	0	0	94%	10%		Prov. Lab/CCDC	1	0	0	0	0	0	0	1	0	0	0	0	0	0	100%
China, Zhejiang	Prov. Lab	188	2	0	7	179	0	0	99%	3%		Prov. Lab/CCDC	7	0	0	0	0	0	0	7	0	0	0	0	0	0	100%
China, Hainan	Prov. Lab	36	0	0	6	30	0	0	100%	14%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Liaoning	Prov. Lab	87	0	0	3	84	0	0	98%	2%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Qinghai	Prov. Lab	32	0	0	0	32	0	0	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Tibet	Prov. Lab	8	0	0	1	7	0	0	73%	7%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Hong Kong SAR	PHLC	11	0	0	0	11	0	0	100%	0%	28-Jan-19	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Macao SAR	PHLC	3	0	0	0	3	0	0	100%	0%	24-Dec-18	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	NIID	-	-	-	-	-	-	-	-	-	-	NIID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	NIID	116	1	0	8	107	0	0	96%	4%	11-Mar-19	NIID	1	0	0	0	0	0	0	1	0	0	0	0	0	0	100%
Malaysia	IMR	180	0	0	10	170	0	0	89%	4%	19-Feb-19	IMR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mongolia	PHI	6	0	0	3	3	0	0	100%	50%	04-Jan-19	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	IESR	8	0	0	1	7	0	0	100%	13%	25-Jan-19	IESR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	VIDRL	297	93	1	21	182	0	0	88%	5%	28-Feb-19	VIDRL	187	0	63	46	0	0	0	0	78	0	0	0	0	0	100%
Philippines	RITM	396	5	1	14	375	1	0	96%	3%	26-Feb-19	RITM	7	0	2	0	0	0	0	5	0	0	0	0	0	100%	
Republic of Korea	NIH	69	0	0	5	64	0	0	97%	7%	11-Feb-19	NIH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Singapore	SGH	13	0	0	2	11	0	0	96%	8%	30-Jan-19	SGH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viet Nam (North)	NIHE	175	3	0	24	148	0	0	100%	12%	30-Jan-19	NIHE	4	0	2	0	0	0	0	2	0	0	0	0	0	100%	
Viet Nam (South)	PI	175	4	0	21	150	0	0	100%	12%	25-Feb-19	PI	8	0	2	0	0	0	0	6	0	0	0	0	0	100%	
Pacific island countries and areas	VIDRL	11	0	0	1	10	0	0	97%	6%	04-Feb-19	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		6909	144	2	502	6255	1	5	97%	6%			296	0	93	46	0	0	0	0	155	1	1	0	0	100%	

1. CCDC (Chinese Center for Disease Control and Prevention, China); IESR (Institute of Environmental Science and Research, New Zealand); IMR (Institute of Medical Research, Malaysia); NIH (National Institute of Health, Republic of Korea); NIHE (National Institute of Hygiene and Epidemiology, Ha Noi, Viet Nam); NIID (National Institute of Infectious Diseases, Japan); PHI (Public Health Institute, Mongolia); PHLC (Public Health Laboratory Center, China, Hong Kong SAR); PI (Pasteur Institute, Ho Chi Minh, Viet Nam); RITM (Research Institute for Tropical Medicine, Philippines); SGH (Singapore General Hospital); VIDRL (Victorian Infectious Diseases Reference Laboratory, Australia)

2. NPEV growing in L20B cells

Table 2B. Laboratory investigation of stool samples from AFP cases with onset in 2019 and key laboratory indicators

Country/area	Polio laboratory	Total no. of AFP cases with specimens	Results of virus isolation for AFP cases								Intratyptic differentiation/ Sequencing laboratory ¹	No. of isolates received	Results of intratyptic differentiation (ITD)/sequencing for virus isolates																		
			L20B positive	L20B positive + NPEV	NPEV only	Negative	Pending ≤ 14 days	Pending > 14 days	% results reported ≤ 14 days ≥ 80%	% specimens positive for NPEV			Latest report date	Type 1			Type 2			Type 3			NPEV ²	Pending ITD	Discordant pending sequencing	% ITD results reported ≤ 7 days of receipt ≥ 80%					
														Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV									
Australia	VIDRL	4	0	0	0	2	0	2	100%	0%	14-Feb-19	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Brunei Darussalam	VIDRL	1	0	0	0	1	0	0	100%	0%	04-Feb-19	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cambodia	NIID	4	0	0	0	4	0	0	100%	0%	02-Mar-19	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China (total)		406	1	0	13	339	0	53	95%	3%	06-Mar-19		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Anhui	Prov. Lab	22	0	0	0	22	0	0	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Beijing	Prov. Lab	3	0	0	0	3	0	0	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Chongqing	Prov. Lab	3	0	0	0	1	0	2	0%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Fujian	Prov. Lab	12	0	0	0	12	0	0	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Gansu	Prov. Lab	7	0	0	0	6	0	1	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Guangdong	Prov. Lab	30	0	0	1	28	0	1	100%	3%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Guangxi	Prov. Lab	19	0	0	1	16	0	2	100%	6%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Guizhou	Prov. Lab	21	0	0	2	15	0	4	100%	12%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Hebei	Prov. Lab	27	0	0	0	27	0	0	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Heilongjiang	Prov. Lab	9	0	0	0	9	0	0	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Henan	Prov. Lab	32	0	0	1	30	0	1	90%	3%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Hubei	Prov. Lab	14	0	0	1	12	0	1	85%	8%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Hunan	Prov. Lab	20	0	0	1	19	0	0	100%	5%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Jiangsu	Prov. Lab	16	0	0	0	14	0	2	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Jiangxi	Prov. Lab	8	0	0	0	8	0	0	88%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Jilin	Prov. Lab	4	0	0	0	1	0	3	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Neimongol	Prov. Lab	11	1	0	0	10	0	0	100%	0%	-	Prov. Lab/CCDC	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Ningxia	Prov. Lab	2	0	0	0	2	0	0	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Shaanxi	Prov. Lab	3	0	0	0	1	0	2	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Shandong	Prov. Lab	20	0	0	1	14	0	5	73%	3%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Shanghai	Prov. Lab	2	0	0	0	2	0	0	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Shanxi	Prov. Lab	12	0	0	0	12	0	0	92%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Sichuan	Prov. Lab	27	0	0	3	7	0	17	100%	30%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Tianjin	Prov. Lab	2	0	0	0	2	0	0	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Xinjiang	Prov. Lab	17	0	0	0	16	0	1	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Yunnan	Prov. Lab	27	0	0	2	20	0	5	91%	4%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Zhejiang	Prov. Lab	19	0	0	0	18	0	1	100%	0%	-	Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Hainan	Prov. Lab	1	0	0	0	1	0	0	100%	0%	-	CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Liaoning	Prov. Lab	8	0	0	0	7	0	1	100%	0%	-	CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Qinghai	Prov. Lab	4	0	0	0	0	0	4	-	-	-	CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Tibet	Prov. Lab	4	0	0	0	4	0	0	25%	0%	-	CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Hong Kong SAR	PHLC	5	0	0	0	4	1	0	100%	0%	07-Mar-19	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Macao SAR	PHLC	0	-	-	-	-	-	-	-	-	-	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	NIID	0	-	-	-	-	-	-	-	-	-	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	NIID	7	0	0	0	9	0	0	100%	0%	11-Mar-19	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Malaysia	IMR	0	-	-	-	-	-	-	-	-	-	IMR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mongolia	PHI	2	0	0	0	2	0	0	100%	0%	11-Mar-19	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	IESR	1	0	0	0	1	0	0	100%	0%	11-Mar-19	IESR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	VIDRL	8	0	0	2	5	0	1	100%	27%	11-Mar-19	VIDRL	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100%	
Philippines	RITM	12	0	0	0	5	7	0	100%	0%	12-Feb-19	RITM	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Korea	NIH	4	0	0	0	4	0	0	100%	0%	11-Mar-19	NIH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Singapore	SGH	1	0	0	0	1	0	0	100%	0%	08-Mar-19	SGH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viet Nam (North)	NIHE	1	0	0	0	1	0	0	100%	0%	15-Feb-19	NIHE	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viet Nam (South)	PI	8	0	0	1	6	1	0	100%	14%	25-Feb-19	PI	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific island countries and areas	VIDRL	1	0	0	0	1	0	0	95%	4%	13-Feb-19	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		465	1	0	16	385	9	56	95%	4%			4	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	1	100%	

1. CCDC (Chinese Center for Disease Control and Prevention, China); IESR (Institute of Environmental Science and Research, New Zealand); IMR (Institute of Medical Research, Malaysia); NIH (National Institute of Health, Republic of Korea); NIHE (National Institute of Hygiene and Epidemiology, Ha Noi, Viet Nam); NIID (National Institute of Infectious Diseases, Japan); PHI (Public Health Institute, Mongolia); PHLC (Public Health Laboratory Center, China, Hong Kong SAR); PI (Pasteur Institute, Ho Chi Minh, Viet Nam); RITM (Research Institute for Tropical Medicine, Philippines); SGH (Singapore General Hospital); VIDRL (Victorian Infectious Diseases Reference Laboratory, Australia)

2. NPEV growing in L20B cells

