

## HIGHLIGHTS

### 100 Days of the Polio Outbreak Response

To mark the 100 days since the Government of Papua New Guinea launched the Emergency Response to the Polio Outbreak, the National Department of Health, with support from WHO, UNICEF and other partners released a report on the key accomplishments and highlights from the response operations.

The 100 Days Report is dedicated to the thousands of front line polio workers who braved challenges and worked long hours to ensure that children in Papua New Guinea are protected from polio.

To read full report please visit:

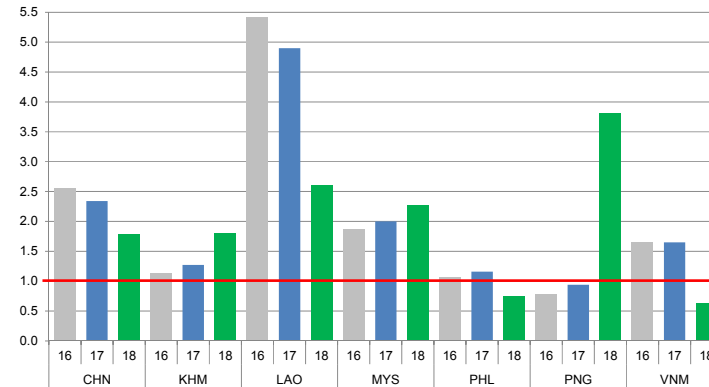
[http://www.who.int/docs/default-source/wpro---documents/emergency/polio/20181004-polio-100-days.pdf?sfvrsn=2f371529\\_2](http://www.who.int/docs/default-source/wpro---documents/emergency/polio/20181004-polio-100-days.pdf?sfvrsn=2f371529_2)



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Chart 1. Non-polio AFP rate (per 100 000 persons < 15 years of age), 2016–2018\*



\* AFP rate annualized as of week 40

Chart 2. Adequate specimen collection rate, 2016–2018

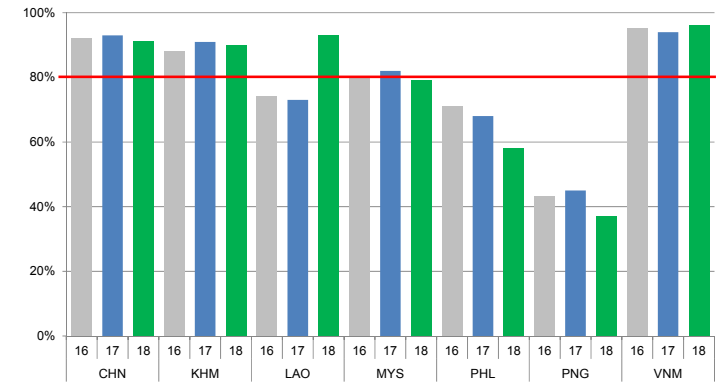


Chart 3. Percentage of reported AFP cases by number of polio vaccination doses, 2018

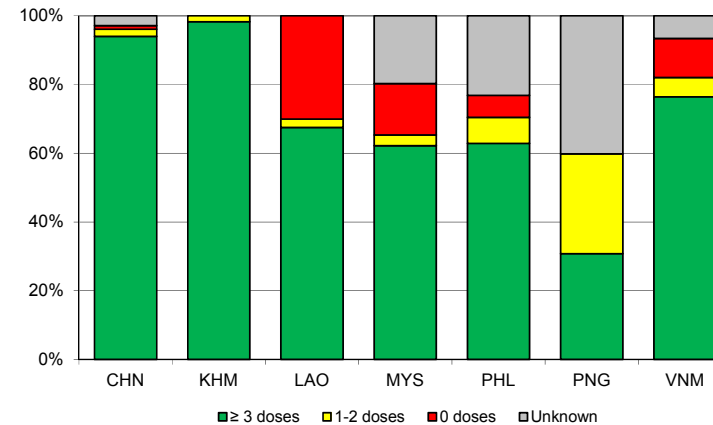
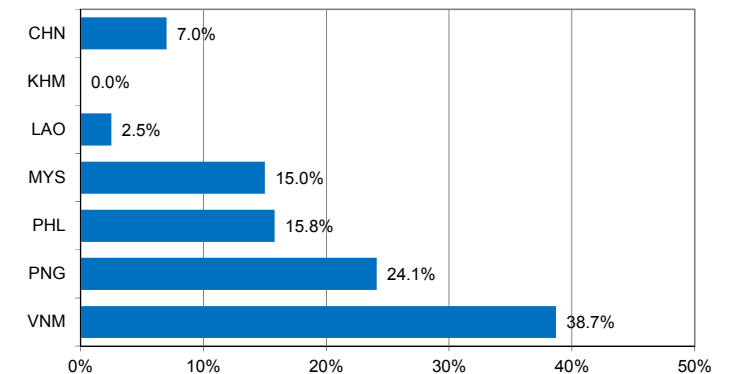


Chart 4. Percentage of reported AFP cases with pending classification > 90 days after onset, 2018



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 1. 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	Days since last report <sup>5</sup>
				Confirmed wild poliovirus	Vaccine-derived poliovirus (VDPV)	Polio-compatible	Discarded (Non-polio)	Pending		Non-polio AFP rate <sup>2</sup>	% with adequate specimens <sup>3</sup>	% investigated ≤ 2 days of notification <sup>4</sup>		
								Total	> 90 days <sup>1</sup> # (%)					
≥ 1	≥ 80%	≥ 80%	≤ 30											
Australia	61	46	46	0	0	2	27	17	6 (13.0%)	1.30	48%	78%	04-Oct-18	5
Brunei Darrusalam	1	1	2	0	0	0	1	1	0 (0.0%)	2.60	100%	100%	03-Sep-18	36
Cambodia	57	44	59	0	0	0	58	1	0 (0.0%)	1.74	90%	86%	03-Oct-18	6
China	5278	2256	3187	0	1	0	2332	854	223 (7.0%)	1.84	91%	100%	05-Oct-18	4
China, Hong Kong SAR	15	9	9	0	0	0	6	3	0 (0.0%)	1.30	100%	100%	03-Oct-18	6
China, Macao SAR	2	1	2	0	0	0	1	1	0 (0.0%)	2.60	100%	100%	18-Sep-18	21
Japan	-	161	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	103	21	40	0	0	0	31	9	1 (2.5%)	2.48	93%	73%	24-Aug-18	46
Malaysia	154	77	127	0	0	0	72	55	19 (15.0%)	2.14	79%	72%	19-Sep-18	20
Mongolia	6	9	5	0	0	0	4	1	0 (0.0%)	0.72	100%	80%	07-Sep-18	32
New Zealand	13	9	6	0	0	0	6	0	0 (0.0%)	0.87	67%	100%	31-Aug-18	39
Papua New Guinea	29	37	141	0	14	2	33	92	34 (24.1%)	4.46	40%	82%	08-Oct-18	1
Philippines	462	338	221	0	0	0	160	61	35 (15.8%)	0.85	62%	94%	02-Oct-18	7
Republic of Korea	68	67	41	0	0	0	31	10	0 (0.0%)	0.80	88%	100%	11-Sep-18	28
Singapore	7	6	8	0	0	0	8	0	0 (0.0%)	1.73	88%	100%	10-Sep-18	29
Viet Nam	385	234	106	0	0	0	50	56	41 (38.7%)	0.59	96%	87%	30-Aug-18	40
Pacific island countries and areas	16	11	1	0	0	0	1	0	0 (0.0%)	0.12	0%	100%	24-Aug-18	46
<b>Total</b>	<b>6657</b>	<b>3327</b>	<b>4001</b>	<b>0</b>	<b>15</b>	<b>4</b>	<b>2821</b>	<b>1161</b>	<b>359 (9.0%)</b>	<b>1.56</b>	<b>87%</b>	<b>97%</b>		

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

<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>	Reached or surpass target
<span style="background-color: yellow; width: 15px; height: 10px; display: inline-block;"></span>	Nearly reached target 0.5-0.99 for non-polio AFP rate; 60-79% for other indicators
<span style="background-color: red; width: 15px; height: 10px; display: inline-block;"></span>	Substantially below target

Table 2. 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 <sup>1</sup>	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 <sup>2</sup>	Pending ITD	Discordant pending sequencing	% ITD results reported ≤ 7 days of receipt							
												Wild			Sabin	VDPV	Wild	Sabin	VDPV	Wild					Sabin	VDPV					
Australia	VIDRL	36	0	0	1	33	1	1	92%	3%	04-Oct-18	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunei Darussalam	VIDRL	2	0	0	0	2	0	0	50%	0%	10-Sep-18	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cambodia	NIID	59	0	0	12	47	0	0	92%	18%	01-Oct-18	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China (total)		3136	21	0	259	2760	0	0	96%	7%	05-Oct-18		70	0	15	0	0	0	0	0	47	8	0	0	0	0	0	0	0	0	100%
China, Anhui	Prov. Lab	178	1	0	12	157	0	0	100%	6%		Prov. Lab/CCDC	8	0	3	0	0	0	0	0	5	0	0	0	0	0	0	0	0	100%	
China, Beijing	Prov. Lab	23	0	0	0	23	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Chongqing	Prov. Lab	22	0	0	2	18	0	0	85%	8%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Fujian	Prov. Lab	121	1	0	12	101	0	0	100%	9%		Prov. Lab/CCDC	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	100%	
China, Gansu	Prov. Lab	69	1	0	4	59	0	0	100%	5%		Prov. Lab/CCDC	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	100%	
China, Guangdong	Prov. Lab	262	1	0	15	245	0	0	92%	4%		Prov. Lab/CCDC	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	100%
China, Guangxi	Prov. Lab	131	1	0	14	115	0	0	98%	10%		Prov. Lab/CCDC	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	100%	
China, Guizhou	Prov. Lab	101	0	0	7	90	0	0	98%	7%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Hebei	Prov. Lab	170	0	0	23	145	0	0	100%	11%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Heilongjiang	Prov. Lab	68	0	0	2	66	0	0	100%	3%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Henan	Prov. Lab	359	2	0	46	308	0	0	100%	12%		Prov. Lab/CCDC	6	0	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0	100%	
China, Hubei	Prov. Lab	96	0	0	7	88	0	0	99%	7%		Prov. Lab/CCDC	4	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	100%	
China, Hunan	Prov. Lab	149	0	0	21	128	0	0	99%	12%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Jiangsu	Prov. Lab	114	5	0	10	97	0	0	100%	8%		Prov. Lab/CCDC	17	0	0	0	0	0	0	9	8	0	0	0	0	0	0	0	0	100%	
China, Jiangxi	Prov. Lab	103	1	0	5	94	0	0	96%	3%		Prov. Lab/CCDC	3	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	100%	
China, Jilin	Prov. Lab	36	2	0	4	28	0	0	100%	9%		Prov. Lab/CCDC	8	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	100%	
China, Neimongol	Prov. Lab	56	2	0	2	52	0	0	96%	3%		Prov. Lab/CCDC	4	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	100%	
China, Ningxia	Prov. Lab	13	0	0	1	11	0	0	100%	8%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Shaanxi	Prov. Lab	58	0	0	2	54	0	0	88%	3%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Shandong	Prov. Lab	259	2	0	20	230	0	0	100%	6%		Prov. Lab/CCDC	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	100%	
China, Shanghai	Prov. Lab	20	0	0	0	20	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Shanxi	Prov. Lab	83	0	0	1	81	0	0	96%	1%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Sichuan	Prov. Lab	180	0	0	5	148	0	0	97%	3%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Tianjin	Prov. Lab	16	0	0	0	16	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Xinjiang	Prov. Lab	91	1	0	7	82	0	0	89%	7%		Prov. Lab/CCDC	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	100%	
China, Yunnan	Prov. Lab	166	0	0	24	137	0	0	93%	12%		Prov. Lab/CCDC	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	100%	
China, Zhejiang	Prov. Lab	98	1	0	7	88	0	0	100%	7%		Prov. Lab/CCDC	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	100%	
China, Hainan	Prov. Lab	25	0	0	5	20	0	0	100%	18%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Liaoning	Prov. Lab	43	0	0	0	36	0	0	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Qinghai	Prov. Lab	23	0	0	0	21	0	0	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Tibet	Prov. Lab	3	0	0	1	2	0	0	60%	20%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Hong Kong SAR	PHLC	9	0	0	0	9	0	0	100%	0%	03-Oct-18	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Macao SAR	PHLC	2	0	0	0	2	0	0	100%	0%	19-Sep-18	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	NIID	0	-	-	-	-	-	-	-	-	-	NIID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	NIID	68	1	0	8	59	0	0	99%	7%	02-Oct-18	NIID	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	100%	
Malaysia	IMR	121	0	0	8	113	0	0	92%	5%	30-Aug-18	IMR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mongolia	PHI	5	0	0	2	3	0	0	100%	40%	08-Oct-18	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	IESR	6	0	0	1	5	0	0	100%	17%	07-Oct-18	IESR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	VIDRL	86	24	0	12	44	0	0	63%	12%	20-Sep-18	VIDRL	55	0	10	26	0	0	0	0	19	0	0	0	0	0	0	0	0	100%	
Philippines	RITM	291	5	1	13	265	7	0	95%	4%	02-Oct-18	RITM	10	0	2	0	0	0	0	8	0	0	0	0	0	0	0	0	0	100%	
Republic of Korea	NIH	41	0	0	4	34	3	0	100%	9%	11-Sep-18	NIH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Singapore	SGH	9	0	0	2	7	0	0	94%	12%	05-Oct-18	SGH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viet Nam (North)	NIHE	126	3	0	14	103	6	0	100%	10%	13-Sep-18	NIHE	4	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	100%	
Viet Nam (South)	PI	104	6	0	11	86	1	0	100%	11%	03-Oct-18	PI	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	100%	
Pacific island countries and areas	VIDRL	1	0	0	1	0	0	0	100%	0%	02-May-18	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>		<b>4102</b>	<b>60</b>	<b>1</b>	<b>347</b>	<b>3573</b>	<b>18</b>	<b>103</b>	<b>97%</b>	<b>7%</b>			<b>146</b>	<b>0</b>	<b>29</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100%</b>	

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 (

Table 3. Laboratory confirmation of polio isolates from environmental samples in 2017–2018 <sup>1</sup>

Country/area	Intratyptic differentiation lab <sup>2</sup>	2017												2018																
		Total number of samples processed	Total number of samples with polio isolates	Polio isolates									NPEV	Pending ITD	Discordant pending sequencing	Total number of samples processed	Total number of samples with polio isolates	Polio isolates									NPEV	Pending ITD	Discordant pending sequencing	
				Type 1			Type 2			Type 3								Type 1			Type 2			Type 3						
				Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV						Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV				
Australia	VIDRL	6	2	0	0	0	0	0	1	0	1	0	4	0	0	17	2	0	2	0	0	0	0	0	0	0	0	12	0	0
China (total)		325	188	0	213	0	0	0	0	0	650	0	1158	0	0	171	119	0	163	0	0	0	1	0	396	2	839	0	0	
China, Fujian	Prov. Lab/CCDC	53	22	0	8	0	0	0	0	0	42	0	331	0	0	49	34	0	9	0	0	0	0	0	77	1	382	0	0	
China, Gansu	Prov. Lab/CCDC	12	10	0	10	0	0	0	0	0	29	0	18	0	0	8	5	0	2	0	0	0	0	0	7	0	28	0	0	
China, Guangdong	Prov. Lab/CCDC	48	39	0	18	0	0	0	0	0	87	0	108	0	0	36	31	0	24	0	0	0	0	0	73	1	154	0	0	
China, Guangxi	Prov. Lab/CCDC	36	20	0	22	0	0	0	0	0	36	0	94	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Heilongjiang	Prov. Lab/CCDC	42	17	0	12	0	0	0	0	0	34	0	112	0	0	20	12	0	3	0	0	0	0	0	24	0	41	0	0	
China, Shandong	Prov. Lab/CCDC	48	28	0	18	0	0	0	0	0	90	0	272	0	0	27	8	0	13	0	0	0	0	0	36	0	149	0	0	
China, Shanghai	Prov. Lab/CCDC	22	18	0	17	0	0	0	0	0	65	0	51	0	0	7	5	0	3	0	0	0	0	0	7	0	25	0	0	
China, Xinjiang	Prov. Lab/CCDC	36	34	0	108	0	0	0	0	0	267	0	115	0	0	24	24	0	109	0	0	1	0	172	0	60	0	0		
China, Yunnan	Prov. Lab/CCDC	28	0	-	-	-	-	-	-	-	-	-	57	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Malaysia	IMR	24	0	-	-	-	-	-	-	-	-	-	22	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
Philippines	RITM	40	8	0	1	0	0	0	0	0	7	0	21	0	0	58	3	0	2	0	0	0	0	0	1	0	18	0	0	
Papua New Guinea	RITM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	0	0	2	0	0	0	0	0	0	2	0	0	
<b>Total</b>		<b>395</b>	<b>198</b>	<b>0</b>	<b>214</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>658</b>	<b>0</b>	<b>1205</b>	<b>0</b>	<b>0</b>	<b>250</b>	<b>126</b>	<b>0</b>	<b>167</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>397</b>	<b>2</b>	<b>871</b>	<b>0</b>	<b>0</b>	

1. Based on year of collection of sample, if available. Otherwise, based on year of receipt at reference laboratory.

2. CCDC (Chinese Center for Disease Control and Prevention, China); IMR (Institute of Medical Research, Malaysia); RITM (Research Institute for Tropical Medicine, Philippines); VIDRL (Victorian Infectious Diseases Reference Laboratory, Australia)

Table 4. Vaccine-derived poliovirus<sup>1</sup> identified from laboratory testing<sup>2</sup>, 2000–2018

Country/area	2000–2009 <sup>3</sup>	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australia									aVDPV2 (1 env)	
Cambodia	2006 - 1 Total - 2									
China	2009 - 1 Total - 27	aVDPV2 (3 AFP + 1 contact + 1 non-AFP) aVDPV3 (1 AFP + 1 non-AFP)	aVDPV1 (1 AFP) aVDPV2 (2 AFP + 1 contact) cVDPV2 (2 AFP) iVDPV2 (1 AFP + 1 non-AFP) iVDPV3 (1 AFP)	aVDPV1 (1 AFP) aVDPV2 (2 AFP) cVDPV2 (2 AFP + 1 contact) iVDPV2 + iVDPV3 (1 AFP)	aVDPV2 (1 non-AFP) iVDPV2 + iVDPV3 (1 AFP)	aVDPV1 (1 non-AFP) aVDPV2 (2 AFP) iVDPV3 (1 AFP)	aVDPV1 (1 AFP) aVDPV2 (1 AFP) iVDPV2 (1 AFP) aVDPV2 (1 env)	aVDPV3 (1 AFP)	aVDPV3 (1 AFP) iVDPV3 (1 AFP) <sup>4</sup>	aVDPV2 (1 env) iVDPV3 (2 AFP) aVDPV3 (1 env) ?VDPV3 (1 env)
China, Hong Kong SAR	2005 - 3									
Japan	2005 - 1 Total - 2									
Lao People's Democratic Republic	2004 - 3						cVDPV1 (8 AFP + 21 contacts)	cVDPV1 (3 AFP + 4 contacts)		
Mongolia	2003 - 1									
Papua New Guinea										cVDPV1 (14 AFP + 6 contacts) ?VDPV1 (1 AFP) ?VDPV1 (2 env)
Philippines	2001 - 3					aVDPV2 (1 AFP)				
Viet Nam				aVDPV2 (2 AFP)						

1. Prefix letter refers to the VDPV category: "cVDPV" = circulating VDPV, "iVDPV" = immunodeficiency-associated VDPV, "aVDPV" = ambiguous VDPV, "?VDPV" = pending. Suffix number refers to the poliovirus serotype (types 1, 2 or 3).

2. Source of specimens could be AFP cases, contacts, non-AFP cases or environmental

3. Refers to year of last VDPV case, and aggregate total of VDPV cases for 2000-2009

4. Continuous excretion for 4 months; potential immunodeficient person.