

HIGHLIGHTS

Second Poliovirus Biorisk Management Training for GAP III Implementation in the Western Pacific Region

The 2nd polio biorisk management training for implementation of the WHO Global Action Plan to minimize poliovirus facility-associated risk after type-specific eradication of wild polioviruses and sequential cessation of oral polio vaccine use (GAP III) in the Western Pacific Region was held from 16-25 February 2016 in Manila. The training was organized in two rounds: 1) for National Polio Containment Coordinators responsible for monitoring and coordinating laboratory containment activities in their respective countries from 16-18 February; and 2) for National Authorities for Containment and members of poliovirus-essential facilities (vaccine manufacturers and polio laboratories) from 22-25 February. The objectives of the training were to provide better understanding of GAP III requirements and how these can be implemented together with potential timelines; to provide a better understanding of the physical containment and biorisk management system requirements as stipulated in GAP III; to provide an understanding on how the associated laboratory assessment and certification mechanism will function; and to prepare participants to overcome challenges that may be encountered during implementation of GAP III.

The Western Pacific Region has successfully completed part 1 of Phase I - the preparation for destruction and containment of type 2 wild poliovirus (WPV2) and vaccine-derived poliovirus (VDPV2). Four countries/areas in the Region will retain WPV2 and/or VDPV2: Australia; China; Hong Kong SAR (China); and Japan. Preparation for part 2 of Phase I - destruction and containment of type 2 Sabin/OPV, is currently ongoing and expected to be completed by 31 July 2016.

CONTACT US

Expanded Programme on Immunization
Regional Office for the Western Pacific
World Health Organization
P.O. Box 2932, 1000 Manila, Philippines
Phone: +63 2 5288001
Fax: +63 2 5211036, 5260279
Email: WPR_EPIdata@wpro.who.int
Web: www.wpro.who.int/immunization

Chart 1. Non-polio AFP rate (per 100 000 persons < 15 years of age), 2013–2015

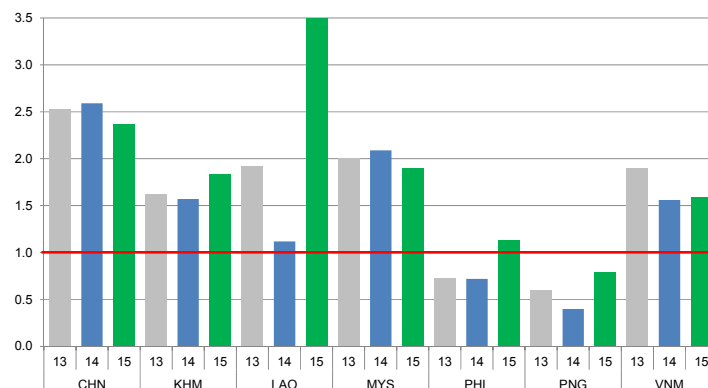


Chart 2. Adequate specimen collection rate, 2013–2015

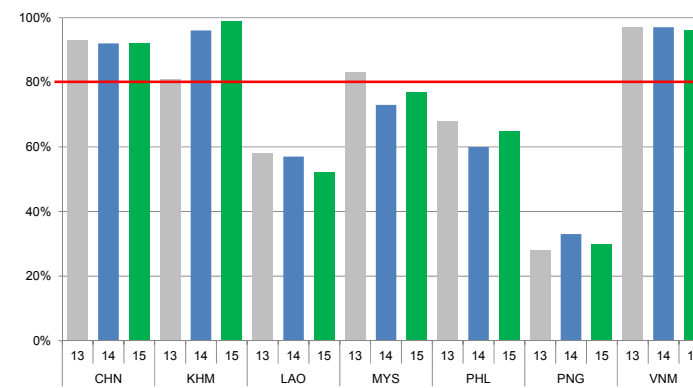


Chart 3. Percentage of reported AFP cases by number of polio vaccination doses, 2015

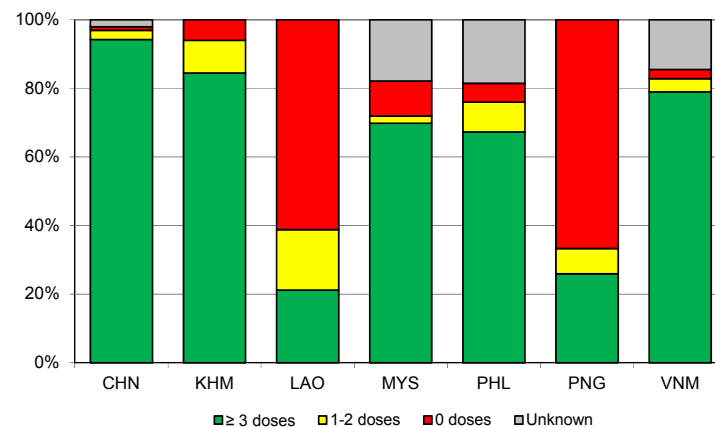
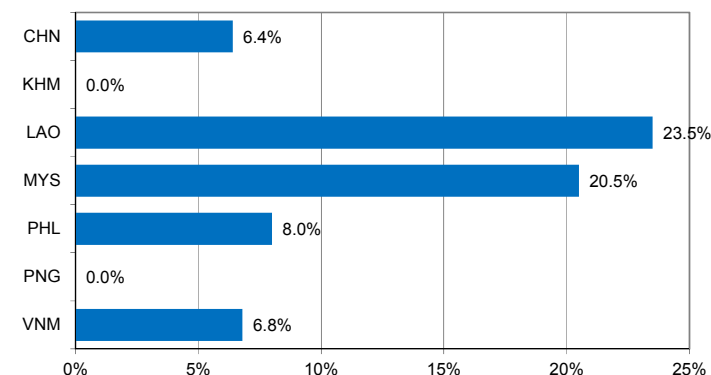


Chart 4. Percentage of reported AFP cases with pending classification > 90 days after onset, 2015



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 2015 and key surveillance indicators

Country/area	2014	2015												
	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
Australia	60	44	53	0	0	0	53	0	0 (0.0%)	1.20	26%	100%	19-Feb-16	-
Brunei Darussalam	4	1	3	0	0	0	3	0	0 (0.0%)	3.00	100%	100%	18-Feb-16	-
Cambodia	72	46	84	0	0	0	84	0	0 (0.0%)	1.83	99%	100%	01-Feb-16	-
China	5758	2234	5302	0	0	1	4535	766	341 (6.4%)	2.37	92%	100%	24-Feb-16	6
China, Hong Kong SAR	19	8	10	0	0	0	10	0	0 (0.0%)	1.25	80%	100%	04-Feb-16	-
China, Macao SAR	1	1	1	0	0	0	1	0	0 (0.0%)	1.00	100%	100%	15-Jan-16	-
Japan	-	163	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	28	24	85	0	7 ⁶	0	57	21	20 (23.5%)	3.54	52%	98%	01-Mar-16	0
Malaysia	161	77	146	0	0	0	107	39	30 (20.5%)	1.90	77%	64%	16-Feb-16	14
Mongolia	9	9	9	0	0	0	7	2	0 (0.0%)	1.00	100%	100%	04-Jan-16	57
New Zealand	8	9	7	0	0	0	5	2	2 (28.6%)	0.78	29%	100%	06-Jan-16	55
Papua New Guinea	12	34	27	0	0	0	26	1	0 (0.0%)	0.79	30%	74%	12-Feb-16	18
Philippines	272	387	438	0	0	0	397	41	35 (8.0%)	1.13	65%	97%	11-Feb-16	19
Republic of Korea	88	70	82	0	0	0	78	4	0 (0.0%)	1.17	85%	87%	15-Jan-16	46
Singapore	8	6	8	0	0	0	8	0	0 (0.0%)	1.33	100%	88%	03-Feb-16	-
Viet Nam	361	231	367	0	0	0	271	96	25 (6.8%)	1.59	96%	96%	06-Jan-16	55
Pacific island countries and areas	15	10	14	0	0	0	10	4	4 (28.6%)	1.40	71%	100%	01-Mar-16	0
Total	6876	3354	6636	0	7	1	5652	976	457 (6.9%)	1.98	89%	98%		

1. Number (%) of reported cases pending classification more than 90 days from date of onset of paralysis to date of last report

2. Percentage of reported cases with two stool specimens collected 24 hours apart and within 14 days of onset of paralysis

3. Percentage of reported cases investigated within two days of notification

4. Report date is fixed as soon as all cases for the year have been classified

5. Countries are expected to submit data at least once per month to WPRO

6. Includes two cases that are 15 years old or older

Green	Reached or surpassed target
Yellow	Nearly reached target: 0.5–0.99 for non-polio AFP rate; 60–79% for other indicators
Red	Substantially below target

Table 1B. Classification of AFP cases with onset in 2016 and key surveillance indicators

Country/area	2015		2016											
	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	53	45	2	0	0	0	1	1	0 (0.0%)	0.26	100%	100%	19-Feb-16	11
Brunei Darussalam	3	1	0	-	-	-	-	-	-	-	-	-	18-Feb-16	12
Cambodia	84	46	3	0	0	0	3	0	0 (0.0%)	0.38	100%	100%	10-Feb-16	20
China	5302	2234	286	0	0	0	5	281	0 (0.0%)	0.74	92%	100%	24-Feb-16	6
China, Hong Kong SAR	10	8	0	-	-	-	-	-	-	-	-	-	04-Feb-16	26
China, Macao SAR	1	1	0	-	-	-	-	-	-	-	-	-	22-Feb-16	8
Japan	-	163	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	85	24	27	0	2 ⁶	0	8	17	0 (0.0%)	6.50	81%	96%	01-Mar-16	0
Malaysia	146	77	6	0	0	0	0	6	0 (0.0%)	0.45	83%	33%	10-Feb-16	20
Mongolia	9	9	0	-	-	-	-	-	-	-	-	-	04-Jan-16	57
New Zealand	7	9	0	-	-	-	-	-	-	-	-	-	06-Jan-16	55
Papua New Guinea	27	34	2	0	0	0	0	2	0 (0.0%)	0.34	100%	100%	12-Feb-16	18
Philippines	438	394	19	0	0	0	0	19	0 (0.0%)	0.28	79%	89%	11-Feb-16	19
Republic of Korea	82	70	0	-	-	-	-	-	-	-	-	-	15-Jan-16	46
Singapore	8	6	0	-	-	-	-	-	-	-	-	-	03-Feb-16	27
Viet Nam	367	231	0	-	-	-	-	-	-	-	-	-	06-Jan-16	55
Pacific island countries and areas	14	10	0	-	-	-	-	-	-	-	-	-	01-Mar-16	0
Total	6636	3362	345	0	2	0	17	326	0 (0.0%)	0.59	90%	98%		

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
6. Includes one case that is 15 years old or older

Green	Reached or surpassed target
Yellow	Nearly reached target: 0.5–0.99 for no n-polio AFP rate; 60–79% for other indicators
Red	Substantially below target

Table 2A. Laboratory investigation of stool samples from AFP cases with onset in 2015 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	45	0	0	4	40	0	1	95%	5%	01-Feb-16	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Brunei Darussalam	VIDRL	3	0	0	0	2	0	1	100%	0%	01-Feb-16	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Cambodia	NIID	84	1	0	10	73	0	0	96%	11%	14-Jan-16	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
China (total)		5245	68	1	470	4671	0	35	96%	8%	24-Feb-16		177	0	52	1	0	61	7	0	54	0	2	0	0	0	0	0	0	98%		
China, Anhui	Prov. Lab	305	2	0	21	279	0	3	97%	6%		Prov. Lab/CCDC	4	0	1	0	0	1	0	0	2	0	0	0	0	0	0	0	0	100%		
China, Beijing	Prov. Lab	30	3	0	0	27	0	0	98%	0%		Prov. Lab/CCDC	10	0	3	0	0	4	0	0	3	0	0	0	0	0	0	0	0	100%		
China, Fujian	Prov. Lab	158	4	0	25	129	0	0	99%	15%		Prov. Lab/CCDC	11	0	0	0	0	7	0	0	4	0	0	0	0	0	0	0	0	100%		
China, Gansu	Prov. Lab	103	0	0	12	90	0	1	97%	9%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
China, Guangdong	Prov. Lab	360	9	0	13	336	0	2	97%	3%		Prov. Lab/CCDC	31	0	4	0	0	14	5	0	8	0	0	0	0	0	0	0	0	100%		
China, Guangxi	Prov. Lab	282	3	0	40	226	0	13	98%	12%		Prov. Lab/CCDC	6	0	0	0	0	2	0	0	4	0	0	0	0	0	0	0	0	0	100%	
China, Hebei	Prov. Lab	303	6	1	58	238	0	0	99%	15%		Prov. Lab/CCDC	10	0	7	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Heilongjiang	Prov. Lab	129	1	0	5	123	0	0	100%	4%		Prov. Lab/CCDC	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	100%	
China, Henan	Prov. Lab	503	8	0	48	446	0	1	90%	7%		Prov. Lab/CCDC	16	0	11	0	0	1	0	0	4	0	0	0	0	0	0	0	0	0	100%	
China, Hunan	Prov. Lab	295	1	0	32	258	0	4	98%	10%		Prov. Lab/CCDC	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Jiangsu	Prov. Lab	234	4	0	4	225	0	1	99%	2%		Prov. Lab/CCDC	6	0	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	100%	
China, Jiangxi	Prov. Lab	177	6	0	4	167	0	0	100%	2%		Prov. Lab/CCDC	12	0	6	0	0	4	0	0	2	0	0	0	0	0	0	0	0	0	100%	
China, Jilin	Prov. Lab	51	0	0	5	46	0	0	98%	7%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
China, Shaanxi	Prov. Lab	98	1	0	5	89	0	3	96%	4%		Prov. Lab/CCDC	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Shandong	Prov. Lab	370	1	0	34	335	0	0	98%	7%		Prov. Lab/CCDC	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Shanghai	Prov. Lab	39	0	0	1	38	0	0	100%	3%		Prov. Lab/CCDC	4	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Shanxi	Prov. Lab	138	0	0	12	126	0	0	91%	8%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
China, Sichuan	Prov. Lab	364	1	0	25	334	0	4	94%	6%		Prov. Lab/CCDC	5	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0	100%	
China, Tianjin	Prov. Lab	42	1	0	0	41	0	0	100%	0%		Prov. Lab/CCDC	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	100%	
China, Xinjiang	Prov. Lab	119	3	0	16	100	0	0	97%	13%		Prov. Lab/CCDC	6	0	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Yunnan	Prov. Lab	217	7	0	21	188	0	1	93%	9%		Prov. Lab/CCDC	16	0	6	0	0	4	0	0	6	0	0	0	0	0	0	0	0	0	86%	
China, Zhejiang	Prov. Lab	187	3	0	18	166	0	0	95%	8%		Prov. Lab/CCDC	10	0	2	1	0	4	0	0	1	0	2	0	0	0	0	0	0	0	100%	
China, Chongqing	Prov. Lab	81	1	0	8	70	0	2	99%	7%		CCDC	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	67%	
China, Guizhou	Prov. Lab	216	0	0	27	189	0	0	99%	11%		CCDC	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Hainan	Prov. Lab	39	0	0	3	36	0	0	90%	6%		CCDC	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Hubei	Prov. Lab	181	1	0	22	158	0	0	96%	12%		CCDC	4	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	100%	
China, Liaoning	Prov. Lab	91	0	0	5	86	0	0	97%	4%		CCDC	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	100%	
China, Neimongol	Prov. Lab	88	2	0	3	83	0	0	98%	2%		CCDC	5	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0	100%	
China, Ningxia	Prov. Lab	24	0	0	1	23	0	0	98%	2%		CCDC	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	100%
China, Qinghai	Prov. Lab	19	0	0	2	17	0	0	100%	11%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
China, Tibet	Prov. Lab	2	0	0	0	2	0	0	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
China, Hong Kong SAR	PHLC	10	0	0	0	10	0	0	84%	0%	19-Jan-16	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
China, Macao SAR	PHLC	0	-	-	-	-	-	-	-	-	19-Jan-16	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Japan	NIID	-	-	-	-	-	-	-	-	-		NIID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Lao People's Democratic Republic	NIID	75	10	2	7	56	0	0	99%	10%	06-Feb-16	NIID	18	0	5	6	0	2	0	0	5	0	0	0	0	0	0	0	0	0	100%	
Malaysia	IMR	147	0	0	11	136	0	0	98%	5%	11-Feb-16	IMR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mongolia	PHI	9	0	0	2	7	0	0	94%	22%	11-Jan-16	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
New Zealand	IESR	4	0	0	0	4	0	0	100%	0%	20-Jan-16	IESR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Papua New Guinea	VIDRL	25	1	0	6	18	0	0	95%	21%	01-Feb-16	VIDRL	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100%	
Philippines	RITM	480	4	0	60	414	2	0	90%	10%	09-Feb-16	RITM	9	0	1	0	0	2	0	0	6	0	0	0	0	0	0	0	0	0	100%	
Republic of Korea	NIH	82	0	0	8	72	2	0	89%	9%	15-Jan-16	NIH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Singapore	SGH	8	0	0	1	7	0	0	100%	6%	15-Jan-16	SGH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Viet Nam (North)	NIHE	211	3	0	20	188	0	0	99%	9%	12-Jan-16	NIHE	7	0	4	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	100%	
Viet Nam (South)	PI	175	0	0	17	158	0	0	98%	10%	16-Feb-16	PI	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pacific island countries and areas	VIDRL	15	1	0	3	11	0	0	93%	18%	01-Feb-16	VIDRL	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	100%
Total		6618	88	3	619	5867	4	37	95%	8%			214	0	63	7	0	67	7	0	67	0										

Table 2B. Laboratory investigation of stool samples from AFP cases with onset in 2016 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	2	0	0	0	1	1	0	100%	0%	19-Feb-16	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Brunei Darussalam	VIDRL	0	-	-	-	-	-	-	-	-	19-Feb-16	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cambodia	NIID	3	0	0	0	3	0	0	100%	0%	08-Feb-16	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China (total)		276	4	0	8	246	0	18	95%	3%	24-Feb-16		8	0	1	0	0	2	0	0	5	0	0	0	0	0	0	0	0	100%		
China, Anhui	Prov. Lab	8	0	0	0	8	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
China, Beijing	Prov. Lab	5	0	0	0	5	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Fujian	Prov. Lab	5	0	0	0	5	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Gansu	Prov. Lab	8	0	0	0	8	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Guangdong	Prov. Lab	23	0	0	0	23	0	0	80%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Guangxi	Prov. Lab	15	0	0	1	14	0	0	100%	3%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Hebei	Prov. Lab	16	0	0	2	13	0	1	100%	13%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Heilongjiang	Prov. Lab	4	0	0	0	3	0	1	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Henan	Prov. Lab	17	0	0	1	16	0	0	76%	3%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Hunan	Prov. Lab	7	0	0	1	6	0	0	100%	14%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Jiangsu	Prov. Lab	9	0	0	0	9	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Jiangxi	Prov. Lab	8	0	0	0	8	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Jilin	Prov. Lab	2	0	0	0	2	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Shaanxi	Prov. Lab	7	0	0	0	6	0	1	83%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Shandong	Prov. Lab	19	1	0	1	16	0	1	100%	6%		Prov. Lab/CCDC	3	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	100%		
China, Shanghai	Prov. Lab	0	-	-	-	-	-	-	-	-		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Shanxi	Prov. Lab	2	1	0	0	1	0	0	75%	0%		Prov. Lab/CCDC	2	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	100%		
China, Sichuan	Prov. Lab	29	2	0	1	26	0	0	90%	3%		Prov. Lab/CCDC	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	100%		
China, Tianjin	Prov. Lab	1	0	0	0	1	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Xinjiang	Prov. Lab	4	0	0	0	2	0	2	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Yunnan	Prov. Lab	27	0	0	0	20	0	7	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Zhejiang	Prov. Lab	12	0	0	0	12	0	0	100%	0%		Prov. Lab/CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Chongqing	Prov. Lab	7	0	0	0	7	0	0	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Guizhou	Prov. Lab	10	0	0	0	10	0	0	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Hainan	Prov. Lab	3	0	0	1	2	0	0	100%	33%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Hubei	Prov. Lab	11	0	0	0	11	0	0	90%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Liaoning	Prov. Lab	9	0	0	0	4	0	5	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Neimongol	Prov. Lab	4	0	0	0	4	0	0	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Ningxia	Prov. Lab	2	0	0	0	2	0	0	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Qinghai	Prov. Lab	2	0	0	0	2	0	0	100%	0%		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Tibet	Prov. Lab	0	-	-	-	-	-	-	-	-		CCDC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Hong Kong SAR	PHLC	1	0	0	0	0	1	0	-	-	18-Feb-16	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China, Macao SAR	PHLC	0	-	-	-	-	-	-	-	-	18-Feb-16	PHLC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	NIID	-	-	-	-	-	-	-	-	-		NIID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	NIID	15	4	0	1	10	0	0	93%	7%	01-Mar-16	NIID	7	0	2	4	0	0	0	0	1	0	0	0	0	0	0	0	0	100%		
Malaysia	IMR	17	0	0	0	17	0	0	100%	0%	11-Feb-16	IMR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mongolia	PHI	0	-	-	-	-	-	-	-	-	12-Feb-16	NIID	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	IESR	1	0	0	0	0	1	0	-	-	01-Mar-16	IESR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	VIDRL	4	0	0	0	1	3	0	100%	0%	19-Feb-16	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Philippines	RITM	39	1	0	1	20	17	0	80%	5%	16-Feb-16	RITM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	-	-	-	
Republic of Korea	NIH	0	-	-	-	-	-	-	-	-	15-Jan-16	NIH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Singapore	SGH	1	0	0	0	0	1	0	-	-	26-Feb-16	SGH	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viet Nam (North)	NIHE	3	0	0	1	2	0	0	100%	33%	19-Feb-16	NIHE	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viet Nam (South)	PI	5	0	0	2	3	0	0	100%	40%	16-Feb-16	PI	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific island countries and areas	VIDRL	2	0	0	0	1	1	0	100%	0%	19-Feb-16	VIDRL	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		369	9	0	13	304	25	18	100%	2%			16	0	3	4	0	2	0	0	6	0	0	0	0	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

Table 3. Laboratory confirmation of polio isolates from environmental samples in 2014–2015 ¹

Country/area	Intratype differentiation lab ²	2014													2015														
		Total number of samples processed	Total number of samples with polio isolates	Type 1			Type 2			Type 3			NPEV	Pending ITD	Discordant pending sequencing	Total number of samples processed	Total number of samples with polio isolates	Type 1			Type 2			Type 3			NPEV	Pending ITD	Discordant pending sequencing
				Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV						Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV			
Australia	VIDRL	3	0	-	-	-	-	-	-	-	-	-	3	0	0	29	2	0	0	0	1	0	0	1	0	26	0	0	
China (total) ³		167	167	0	79	0	0	129	2	0	115	0	0	0	0	1486	630	0	193	0	0	243	1	0	274	0	851	5	35
China, Fujian	Prov. Lab/CCDC	14	14	0	1	0	0	4	0	0	0	0	0	0	0	77	13	0	0	0	0	12	0	0	1	0	64	0	0
China, Gansu	Prov. Lab/CCDC	0	0	-	-	-	-	-	-	-	-	-	-	-	-	88	46	0	11	0	0	9	0	0	28	0	37	5	0
China, Guangdong	Prov. Lab/CCDC	48	48	0	21	0	0	22	0	0	15	0	0	0	0	171	43	0	11	0	0	24	1	0	7	0	128	0	0
China, Guangxi	Prov. Lab/CCDC	0	0	-	-	-	-	-	-	-	-	-	-	-	-	261	71	0	10	0	0	12	0	0	52	0	190	0	0
China, Heilongjiang	Prov. Lab/CCDC	18	18	0	11	0	0	37	1	0	47	0	0	0	0	47	20	0	2	0	0	16	0	0	2	0	27	0	0
China, Shandong	Prov. Lab/CCDC	48	48	0	13	0	0	16	0	0	23	0	0	0	0	305	108	0	43	0	0	25	0	0	40	0	197	0	0
China, Shanghai	Prov. Lab/CCDC	12	12	0	6	0	0	12	0	0	10	0	0	0	0	129	21	0	2	0	0	12	0	0	7	0	108	0	0
China, Xinjiang	Prov. Lab/CCDC	27	27	0	27	0	0	38	1	0	20	0	0	0	0	396	308	0	114	0	0	133	0	0	137	0	88	0	35
China, Yunnan	Prov. Lab/CCDC	0	0	-	-	-	-	-	-	-	-	-	-	-	-	12	0	0	0	0	0	0	0	0	0	0	12	0	0
Malaysia	IMR	21	7	0	1	0	0	1	0	0	5	0	7	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		191	174	0	80	0	0	130	2	0	120	0	10	0	0	1515	632	0	193	0	0	244	1	0	275	0	877	5	35

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); VIDRL (Victorian Infectious Diseases Reference Laboratory, Australia)
3. Reported data from China are currently being verified and may be amended in the next issue of the bulletin.

Table 4. Vaccine-derived poliovirus identified from laboratory testing², 2000-2016

Country/area	2000–2009 ³	2010	2011	2012	2013	2014	2015	2016
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 (1 AFP + 1 non-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)	
China, Hong Kong SAR	2005 - 3							
Japan	2005 - 1 Total - 2							
Lao People's Democratic Republic	2004 - 3						cVDPV1 (7 AFP + 21 contacts)	cVDPV1 (2 AFP + 4 contacts)
Mongolia	2003 - 1							
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, or non-AFP cases
3. Refers to year of last VDPV case, and aggregate total of VDPV cases for 2000-2009