

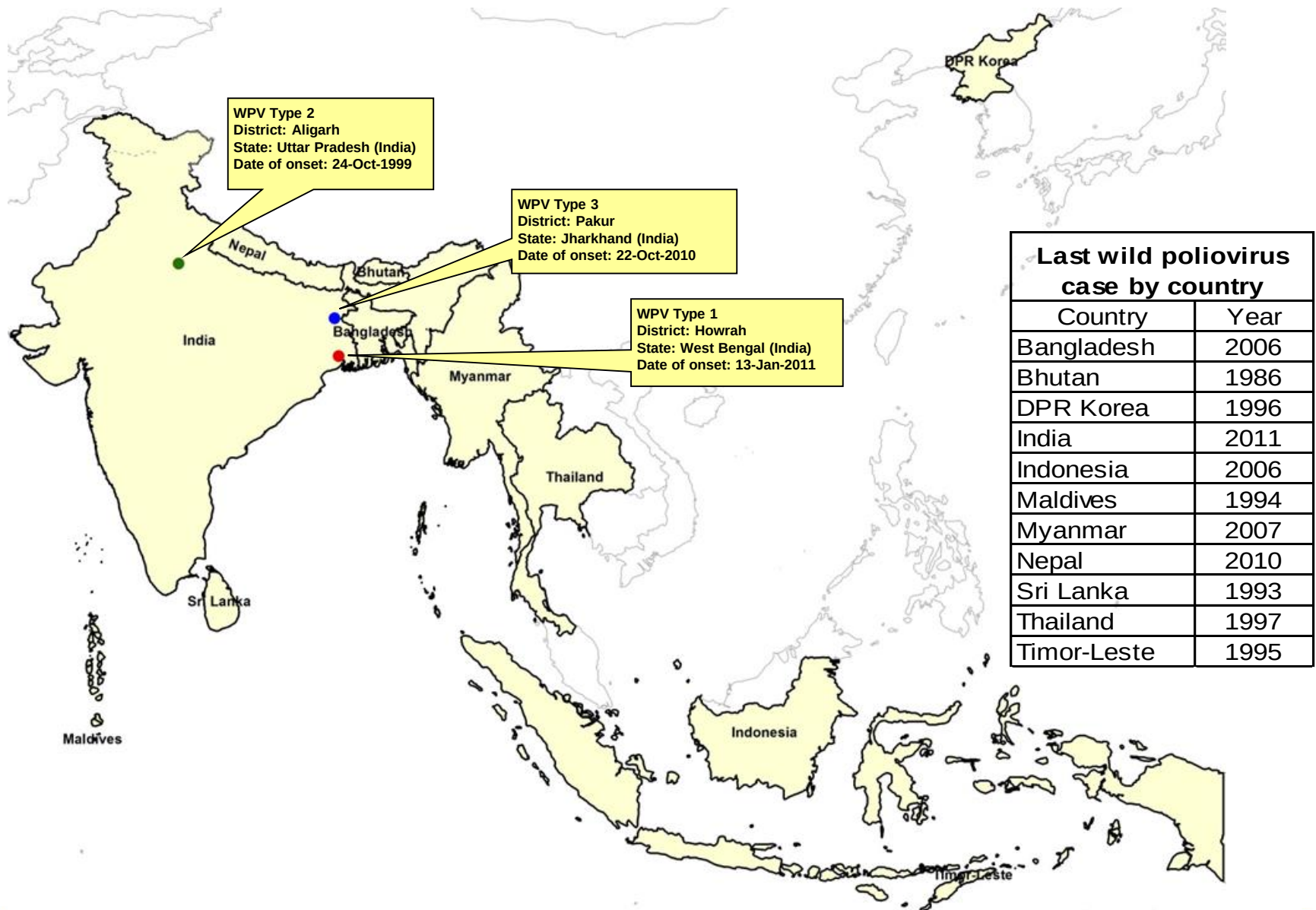
VPD Update for Week 17, 2019

Data as of 29 April 2019

Immunization and Vaccine Development (IVD) SEARO

*Protecting People from Vaccine
Preventable Diseases*

Last wild poliovirus cases confirmed by type, SEAR



Vaccine Derived Poliovirus (VDPV) cases, SEAR-2018



Monthly Distribution of AFP Cases

SEAR, 2018 – 2019

AFP cases by month of paralysis onset, last 14 months (data from weekly case-based reports)																	
Country	2018 total AFP	2019 AFP to date	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Date of last report
Bangladesh	1 404	498	121	155	151	133	165	121	114	98	104	62	124	134	153	87	29-Apr-19
Bhutan	8	3	0	0	3	0	1	1	0	1	1	0	2	0	1	0	27-Apr-19
DPR Korea	130	40	12	11	19	12	14	10	11	5	11	4	11	10	10	9	19-Apr-19
India	36 446	9 598	2 637	2 402	2 813	2 945	3 214	3 405	3 944	3 669	3 037	2 802	2 806	2 735	2 967	1 090	26-Apr-19
Indonesia	1 681	209	161	150	142	76	123	144	157	184	172	112	95	68	45	1	22-Apr-19
Maldives	7	4	2	2	0	0	0	1	1	1	0	0	2	1	1	0	28-Apr-19
Myanmar	335	52	19	19	33	13	31	41	55	40	27	15	23	21	8	0	22-Apr-19
Nepal	334	106	33	32	26	30	39	34	28	21	13	26	30	27	33	16	28-Apr-19
Sri Lanka	62	25	3	6	3	7	6	5	4	7	6	5	9	11	4	1	26-Apr-19
Thailand	240	100	18	11	14	19	20	30	36	24	26	17	28	29	35	8	26-Apr-19
Timor-Leste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21-Feb-19
TOTAL	40 647	10 635	3 006	2 788	3 204	3 235	3 613	3 792	4 350	4 050	3 397	3 043	3 130	3 036	3 257	1 212	

Primary Culture Results from AFP Cases, 2018

Country	Polio Laboratories	Number of AFP cases with specimens received in Lab	AFP cases						AFP specimens		% NPEV	Specimens from other sources ²			
			Positive Culture	Positive Culture + NPEV	NPEV Only	Negative	Pending ¹		Received by lab	% Primary Culture Reports Within 14 days		Number received by lab	Results		
							≤14 days	>14 days					Vaccine	VPV	Wild
Bangladesh	IPH, Dhaka	1 398	9	2	277	1 110	0	0	2 796	98.5	16.3	80	1	0	0
Bhutan	NIH, Bangkok	7	0	0	1	6	0	0	14	100	14	0	0	0	0
DPRK	NPL, Pyongyang	108	0	0	11	97	0	0	223	99.1	10.8	50	0	0	0
India	BJMC, Ahmedabad	4 722	191	27	942	3 562	0	0	9 437	99.6	16.4	0	0	0	0
	NIV, Bengaluru	3 107	104	13	816	2 174	0	0	6 223	97.0	22.2	0	0	0	0
	IoS, Kolkatta	4 996	155	12	847	3 982	0	0	9 986	95.0	13.5	0	0	0	0
	KIPM, Chennai	3 783	82	4	625	3 072	0	0	7 546	100.0	13.2	0	0	0	0
	NCDC, Delhi	6 145	143	15	857	5 130	0	0	12 261	99.2	12.0	1	0	1	0
	CRI, Kasauli	1 779	19	1	202	1 557	0	0	3 553	99.7	9.0	0	0	0	0
	SGPGI, Lucknow	7 236	136	16	1 294	5 790	0	0	14 481	96.6	13.6	200	17	0	0
	ERC, Mumbai	3 715	113	11	800	2 791	0	0	7 408	96.4	18.9	11	1	0	0
India Sub Total		35 483	943	99	6 383	28 058	0	0	70 895	97.8	14.7	212	18	1	0
Indonesia	Bio Farma, Bandung	524	3	0	19	502	0	0	1 045	88	3.4	0	0	0	0
	NIHRD, Jakarta	629	4	0	66	559	0	0	1 243	100	8.8	0	0	0	0
	PHL, Surabaya	449	5	0	47	397	0	0	884	100	9.3	0	0	0	0
Indonesia Sub Total		1 602	12	0	132	1 458	0	0	3 172	96.1	7.2	0	0	0	0
Maldives	MRI, Colombo	0													
Myanmar	NHL, Yangon	333	5	0	48	279	0	1	663	96	13.1	0	0	0	0
Nepal	NIH, Bangkok	333	2	0	55	275	0	1	665	100	14.8	45	1	0	0
	Labs in India ³	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Sri Lanka	MRI, Colombo	54	2	0	3	48	0	1	120	99	5.0	219	1	0	0
Thailand	NIH, Bangkok	232	5	0	12	215	0	0	465	99.6	5.2	0	0	0	0
Timor-Leste	NIH, Bangkok	0													
SEAR		39 550	978	101	6 922	31 546	0	3	79 013	97.7	14.4	606	21	1	0

¹ Calculation based on date specimen received in laboratory subtracted from date result report to the national programme.

² Stool samples collected from contact and healthy children survey.

³ Stool samples from cross notified AFP cases tested in India

Primary Culture Results from AFP Cases, 2019

Country	Polio Laboratories	Number of AFP cases with specimens received in Lab	AFP cases						AFP specimens		% NPEV	Specimens from other sources ²			
			Positive Culture	Positive Culture + NPEV	NPEV Only	Negative	Pending ¹		Received by lab	% Primary Culture Reports Within 14 days		Number received by lab	Results		
							≤14 days	>14 days					Vaccine	VPV	Wild
Bangladesh	IPH, Dhaka	457	3	1	22	252	50	129	914	99.5	6.3	20	0	0	0
Bhutan	NIH, Bangkok	3	0	0	0	3	0	0	6	100	0	0	0	0	0
DPRK	NPL, Pyongyang	33	0	0	3	30	0	0	65	100.0	9.2	0	0	0	0
India	BJMC, Ahmedabad	1 280	47	1	122	990	119	1	2 547	99.9	8.4	0	0	0	0
	NIV, Bengaluru	746	18	1	83	586	58	0	1 491	98.6	10.5	0	0	0	0
	IoS, Kolkatta	1 238	49	2	84	1 040	63	0	2 472	94.7	6.0	0	0	0	0
	KIPM, Chennai	911	17	0	83	810	1	0	1 813	100.0	6.9	0	0	0	0
	NCDC, Delhi	1 588	95	3	103	1 360	27	0	3 131	99.5	5.4	0	0	0	0
	CRI, Kasauli	390	6	0	25	347	12	0	783	99.5	4.2	0	0	0	0
	SGPGI, Lucknow	2 008	123	2	158	1 549	176	0	4 014	98.3	5.9	0	0	0	0
	ERC, Mumbai	687	29	0	65	593	0	0	1 349	98.7	8.2	4	1	0	0
India Sub Total		8 848	384	9	723	7 275	456	1	17 600	98.5	6.5	4	1	0	0
Indonesia	Bio Farma, Bandung	18	0	0	1	17	0	0	36	100	5.6	0	0	0	0
	NIHRD, Jakarta	106	1	0	9	91	5	0	211	100	6.5	0	0	0	0
	PHL, Surabaya	77	0	0	10	64	0	3	150	100	11.8	55	3	2	0
Indonesia Sub Total		201	1	0	20	172	5	3	397	100	8.6	55	3	2	0
Maldives	MRI, Colombo	0													
Myanmar	NHL, Yangon	49	1	0	9	39	0	0	98	90.8	18.4	10	1	0	0
Nepal	NIH, Bangkok	106	0	0	6	82	18	0	175	99.4	4.6	10	0	0	0
	Labs in India ³	0													
Sri Lanka	MRI, Colombo	19	1	0	1	17	0	0	41	100	4.9	76	0	0	0
Thailand	NIH, Bangkok	86	1	0	6	77	2	0	168	100	5.5	0	0	0	0
Timor-Leste	NIH, Bangkok	0													
SEAR		9 802	391	10	790	7 947	531	133	19 464	98.5	6.6	175	5	2	0

¹ Calculation based on date specimen received in laboratory subtracted from date result report to the national programme.

² Stool samples collected from contact and healthy children survey.

³ Stool samples from cross notified AFP cases tested in India

Bihar

 Wild poliovirus type 1
  Wild poliovirus type 3
  Negative for wild poliovirus
  Sampling not scheduled
 Type 1 VDPV
  Type 2 VDPV
  Type 3 VDPV
  Pending
  X Samples not collected

Poliovirus Detected in Sewage Samples, India, 2019

Bihar

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Choti pahari (CHP)																																																				
Dujara (DJR)																																																				
Transport nagar (TSN)																																																				

Delhi

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Batala house (Okhla) (BTH)																																																				
Bhalswa lake (BWL)																																																				
Nangloi (NGL)																																																				
Red cross hospital (RCH)																																																				
Sonia vihar (SNV)																																																				
Swam cinema (SWN)																																																				
Wazirpur JJ colony (WJC)																																																				

Gujarat

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
AMC,Gomtipur SPS (GPS)																																																				
AMC, Old Piranasp (PTP)																																																				

Karnataka

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Hebbal STP (HBL)																																																				
K & C Valley STP (KCV)																																																				
Raja CanaL STP (RCL)																																																				
V Valley (WL)																																																				

Maharashtra

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
F ward																																																				
G ward																																																				
L ward																																																				
M ward																																																				
P ward																																																				
S ward																																																				

■ Wild poliovirus type 1
 ■ Wild poliovirus type 3
 ■ Negative for wild poliovirus
 Sampling not scheduled
 ■ Type 1 VDPV
 ■ Type 2 VDPV
 ■ Type 3 VDPV
 Pending
 X Samples not collected

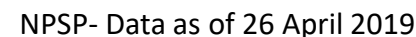
Punjab

Telangana

Uttar Pradesh

West Bengal

 Wild poliovirus type 1
  Wild poliovirus type 3
  Negative for wild poliovirus
  Sampling not scheduled
 Type 1 VDPV
  Type 2 VDPV
  Type 3 VDPV
  Pending
  X Samples not collected



Laboratory Data of Environmental Surveillance 2015-2017, NPML,IPH Bangladesh, Report)

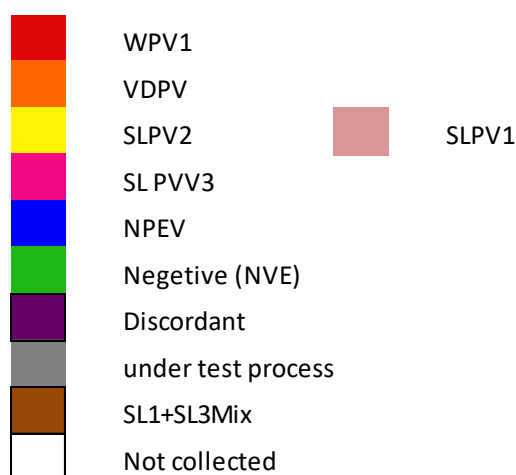
Site																																																						
Year 2015	City	#Site	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
	Dhaka	Niketon																																																				
	Gazipur	Esthema																																																				
	Dhaka	Gulshan																																																				
	Dhaka	Bashabo																																																				

Report on Epidemiological Week 52, 2016, NPML-IPH, Bangladesh: total collected 80; NPEV 25 ; Polio/vaccine: SL3-2

Site																																																						
Year 2016	City	#Site	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
	Dhaka	Niketon	14		17		20		23		26		29		32		35		38		41		44		47		50		53					59		62		65		68		71		74		77		80		83	85	86		89
	Gazipur	Esthema	13		16		18		22		25		28		31		34		37		40		43		46		49		52		55		58		61		64		67		70		73		76		79		82				88	91
	Dhaka	Gulshan	12		15		19		21		24		27		30		33		36		39		42		45		48		51		54		57		60		63		66		69		72		75		78		81		84		87	90
	Dhaka	Bashabo																																																				

Report on Epidemiological Week 52, 2017, NPML-IPH, Bangladesh: total collected 102; NPEV 74(72%) ; Polio/vaccine:10(SL1- 3; SL3-7)

Site																																																								
Year 2017	City	#Site	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52		
	Dhaka	Niketon	92	95	96		100		104		108		112		116		120		124		128		132		136		140		144		148		152		156		160		164		168		172		176		180		184		188		192			
	Gazipur	Esthema				99		203		107		111		115		119		123		127		131		134		138		142		146		150		154		158		162		166		170		174		178		182		186		190				
	Dhaka	Gulshan		194		98		102		106		110		114		118		122		126		130		134		138		142		146		150		154		158		162		166		170		174		178		182		186		190				
	Dhaka	Bashabo	93		97		101		105		109		113		117		121		125		129		133		137		141		145		149		153		157		161		165		169		173		177		181		185		189		193			

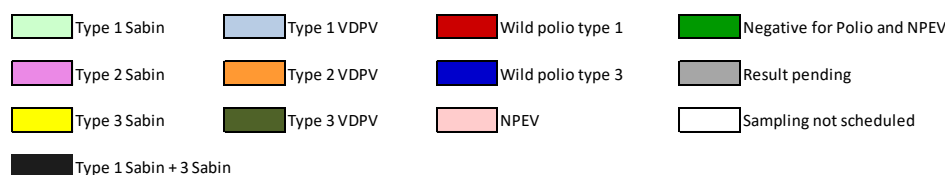


Poliovirus Detected in Sewage Samples, Bangladesh, 2018, 2019

Bangladesh - 2018

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Bangladesh - 2019

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Poliovirus Detected in Sewage Samples, Thailand, 2016-2019

*specimens collected since week 48, 2016

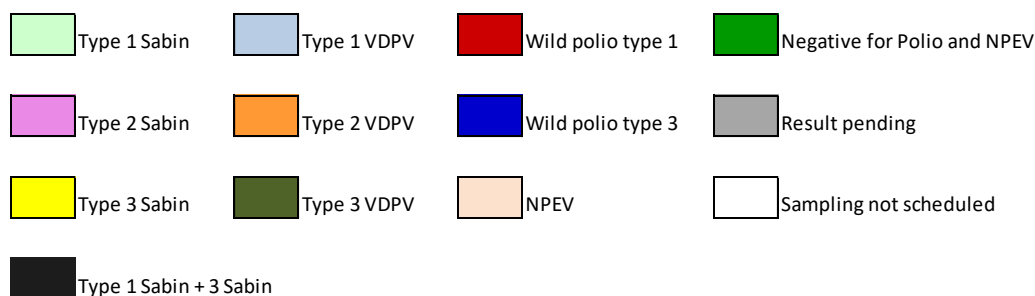
Experiment conducted since Week 15, 2016																																																						
2016	Sampling site	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	
	Dindaeng, Bangkok																																																					
	Samut Sakhon																																																					

2017	Sampling site	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
	Dindaeng, Bangkok																																																				
	Samut Sakhon																																																				

Start to use two-phases separation with Dextran and PEG6000 for sewage sample concentration since week18/2017

2018	Sampling site	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
	Dindaeng, Bangkok																																																				
	Samut Sakhon																																																				

2019	Sampling site	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
	Dindaeng, Bangkok																																																				
	Nongkhaem, Bangkok																																																				
	Samut Sakhon																																																				



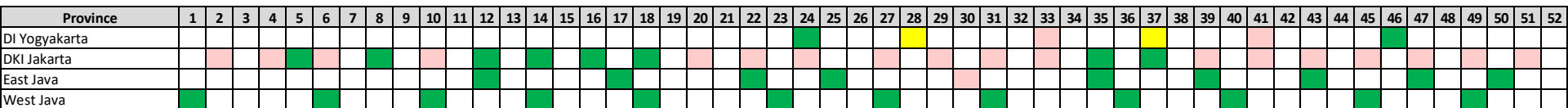
Poliovirus Detected in Sewage Samples, Nepal, 2017-2019

*specimens collected since week 50, 2017

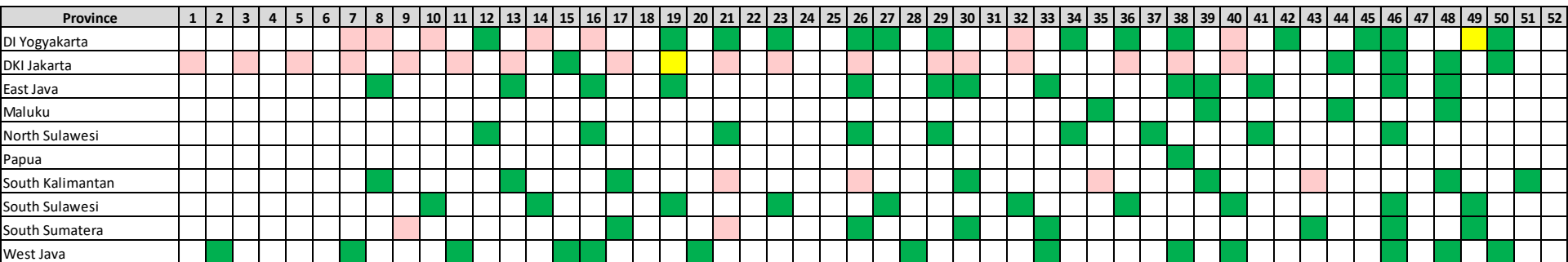
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 Type 1 Sabin	 Type 1 VDPV	 Wild polio type 1	 Negative for Polio and NPEV
 Type 2 Sabin	 Type 2 VDPV	 Wild polio type 3	 Result pending
 Type 3 Sabin	 Type 3 VDPV	 NPEV	 Sampling not scheduled
 Type 1 Sabin + 3 Sabin			

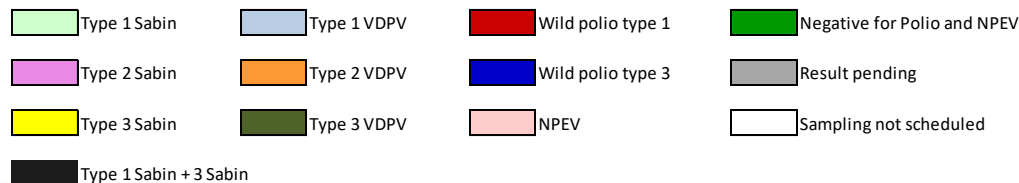
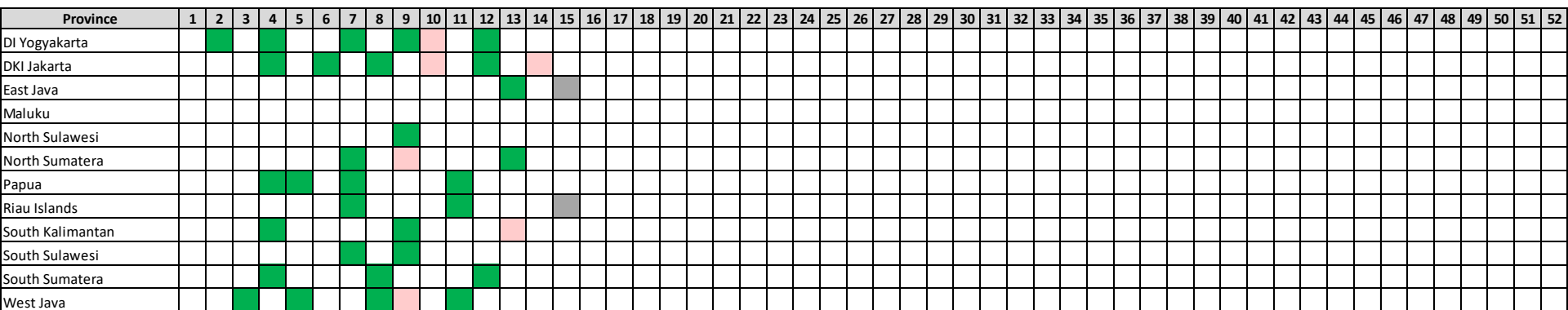
Indonesia - 2017



Indonesia - 2018

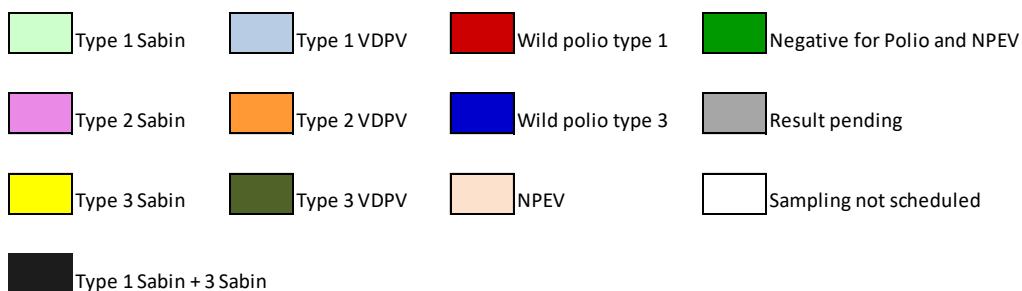


Indonesia - 2019



Poliovirus Detected in Sewage Samples, Myanmar, 2017-2019

*specimens collected since week 47, 2017

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Measles and Rubella Serology (IgM), 2019

Country	Laboratories	Number of Serum Samples Received	Number Tested	Results				% Measles Results Reported within 4 Days
				Measles +ve		Rubella +ve		
				#	%	#	%	
Bangladesh	Dhaka	1321	1321	406	30.7	23	2.5	97.4
Bhutan	Thimphu	50	52	0	0.0	2	3.8	73.1
DPR Korea	Pyongyang	134	134	0	0.0	0	0.0	100.0
India	Ahmedabad	41	35	20	57.1	2	13.3	100.0
	Bengaluru	287	237	53	22.4	12	6.5	73.8
	Bhopal	9	9	8	88.9	1	100.0	100.0
	Chandigarh	68	68	4	5.9	6	9.4	98.5
	Chennai	344	135	42	31.1	14	15.1	100.0
	Delhi	25	25	12	48.0	1	7.7	100.0
	Guw ahati	33	23	10	43.5	1	7.7	95.7
	Hyderabad	85	85	7	8.2	4	5.1	82.4
	Jaipur	36	36	21	58.3	5	33.3	100.0
	Kolkata	1346	1346	532	39.5	272	33.4	93.8
	Lucknow	264	203	54	26.6	4	2.7	99.5
	Manipal	63	38	8	21.1	1	3.3	92.1
	Mumbai	51	37	2	5.4	8	22.9	97.3
Patna	929	929	446	48.0	99	20.5	90.0	
India Total		3581	3206	1219	38.0	430	21.6	91.9
Indonesia	Bandung	158	158	3	1.9	3	1.9	100.0
	Jakarta	690	683	149	21.8	84	15.7	94.7
	Palembang	72	72	7	9.7	9	13.8	56.9
	Surabaya	255	255	24	9.4	28	12.1	100.0
	Yogyakarta	655	655	3	0.5	23	3.5	99.2
Indonesia Total		1830	1823	186	10.2	147	9.0	96.1
Maldives	Male	39	39	1	2.6	4	10.5	76.9
Myanmar	Mandalay	233	233	189	81.1	0	0.0	100.0
	Yangon	2790	1590	1323	83.2	5	1.9	100.0
Myanmar Total		3023	1823	1512	82.9	5	1.6	100.0
Nepal	Kathmandu	421	366	83	22.7	4	1.4	94.3
Sri Lanka	Colombo	91	91	8	8.8	0	0.0	84.6
Thailand	Bangkok	413	413	194	47.0	13	5.9	100.0
	Chiang Mai	120	120	57	47.5	1	1.6	100.0
	Chiang Rai	61	61	21	34.4	1	2.5	100.0
	Chon Buri	162	162	64	39.5	6	6.1	100.0
	Khon Kaen	81	81	27	33.3	3	5.6	100.0
	Nakhon Saw an	0	0	0	NR	0	NR	NR
	Nakhonratchasima	42	42	23	54.8	3	15.8	100.0
	Phitsanulok	80	80	48	60.0	1	3.1	100.0
	Samut Songkhram	114	114	54	47.4	2	3.3	100.0
	Songkhla	1381	1381	845	61.2	6	1.1	100.0
	Surat Thani	12	12	2	16.7	0	0.0	100.0
	Trang	62	62	17	27.4	1	2.2	100.0
	Ubon Ratchathani	69	69	22	31.9	2	4.3	100.0
Udon Thani	16	16	7	43.8	0	0.0	100.0	
Thailand Total		2613	2613	1381	52.9	39	3.2	100.0
Timor-Leste	Dili	19	19	1	5.3	0	0.0	42.1
TOTAL		13122	11487	4797	41.8	654	9.8	96.2

Source: Reported by SEAR Measles Laboratory Network

NR=No Report

Measles and Rubella Serology (IgM), 2018

Country	Laboratories	Number of Serum Samples Received	Number Tested	Results				% Measles Results Reported within 4 Days
				Measles +ve		Rubella +ve		
				#	%	#	%	
Bangladesh	Dhaka	5745	5745	1706	29.7	289	7.2	93.2
Bhutan	Thimphu	427	405	18	4.4	11	2.8	91.1
DPR Korea	Pyongyang	475	475	0	0.0	0	0.0	NR
India	Ahmedabad	328	298	163	54.7	32	23.7	61.4
	Bengaluru	725	587	130	22.1	20	4.4	60.6
	Bhopal	196	165	120	72.7	4	8.9	86.7
	Chandigarh	360	360	203	56.4	11	7.0	47.5
	Chennai	1365	322	59	18.3	92	35.0	73.0
	Delhi	369	369	237	64.2	14	10.6	35.2
	Guw ahati	170	160	110	68.8	6	12.0	15.6
	Hyderabad	313	311	15	4.8	29	9.8	43.1
	Jaipur	358	358	215	60.1	12	8.4	32.7
	Kolkata	2627	2624	1139	43.4	495	33.3	45.0
	Lucknow	3584	3211	1771	55.2	173	12.0	26.5
	Manipal	23	16	1	6.3	0	0.0	93.8
	Mumbai	980	740	457	61.8	52	18.4	40.8
Patna	1288	1288	526	40.8	69	9.1	12.2	
India Total		12686	10809	5146	47.6	1009	17.8	37.0
Indonesia	Bandung	263	251	2	0.8	24	9.6	98.8
	Jakarta	2350	1636	232	14.2	616	43.9	75.1
	Palembang	427	241	10	4.1	209	90.5	100.0
	Surabaya	1489	1277	401	31.4	359	41.0	85.7
	Yogyakarta	1306	1306	29	2.2	123	9.6	98.4
Indonesia Total		5835	4711	674	14.3	1331	33.0	86.9
Maldives	Male	32	32	2	6.3	1	3.3	75.0
Myanmar	Mandalay	66	66	30	45.5	1	2.8	100.0
	Yangon	1450	1445	846	58.5	19	3.2	100.0
Myanmar Total		1516	1511	876	58.0	20	3.1	100.0
Nepal	Kathmandu	1373	1353	171	12.6	36	3.0	56.5
Sri Lanka	Colombo	143	143	8	5.6	6	4.4	85.3
Thailand	Bangkok	1716	1716	915	53.3	13	1.6	100.0
	Chiang Mai	211	211	132	62.6	1	1.3	98.1
	Chiang Rai	69	69	5	7.2	0	0.0	100.0
	Chon Buri	257	257	103	40.1	1	0.6	100.0
	Khon Kaen	73	73	29	39.7	0	0.0	100.0
	Nakhon Saw an	13	13	3	23.1	0	0.0	84.6
	Nakhonratchasima	64	64	24	37.5	0	0.0	100.0
	Phitsanulok	112	112	54	48.2	3	5.2	100.0
	Samut Songkhram	214	214	108	50.5	3	2.8	100.0
	Songkhla	2908	2908	1836	63.1	21	2.0	100.0
	Surat Thani	15	15	3	20.0	0	0.0	100.0
	Trang	69	69	11	15.9	0	0.0	100.0
	Ubon Ratchathani	146	146	61	41.8	3	3.5	100.0
	Udon Thani	190	190	68	35.8	5	4.1	100.0
Thailand Total		6057	6057	3352	55.3	50	1.8	99.9
Timor-Leste	Dili	165	165	1	0.6	9	5.5	100.0
TOTAL		34454	31406	11954	38.1	2762	14.2	71.5

Source: Reported by SEAR Measles Laboratory Network

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