

AFP Surveillance Bulletin - India

Report for week 17, ending 27 April 2019

Table 1: AFP cases by month of paralysis onset, last 13 months

State/UT's	Total AFP cases in 2018	AFP cases as on week 17, 2018	AFP cases as on week 17, 2019	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
A&N ISLANDS	8	4	1	0	2	0	0	1	0	1	0	0	1	0	0	0
ANDHRA PRADESH	419	123	104	31	42	24	35	40	32	37	32	43	39	24	32	9
ARUNACHAL PR.	10	1	7	0	0	0	0	1	0	0	5	2	4	0	3	0
ASSAM	271	67	71	18	24	28	29	15	22	17	15	36	23	20	17	11
BIHAR	7066	1966	1735	456	540	581	618	607	690	735	609	504	446	435	593	261
CHANDIGARH	55	15	15	5	3	1	4	5	8	7	3	5	8	3	4	0
CHHATTISGARH	247	62	72	18	15	20	17	22	27	22	15	24	27	24	19	2
D&N HAVELI	3	1	1	0	1	0	0	0	1	0	0	0	1	0	0	0
DAMAN & DIU	4	2	2	0	0	0	0	0	0	0	1	1	0	1	0	1
DELHI	689	196	208	58	70	48	51	52	64	55	63	66	85	50	58	15
GOA	25	2	15	1	1	4	2	1	3	3	1	5	4	4	6	1
GUJARAT	938	307	268	75	67	82	92	83	77	56	50	70	80	84	73	31
HARYANA	822	197	220	48	51	54	59	67	95	111	77	68	75	63	65	17
HIMACHAL PRADESH	74	31	19	6	3	3	3	8	4	2	10	6	7	3	8	1
JAMMU & KASHMIR	209	62	57	20	19	18	14	22	20	8	15	17	16	15	19	7
JHARKHAND	871	231	288	63	64	63	72	88	77	98	70	64	100	71	87	30
KARNATAKA	850	163	216	48	81	62	96	87	82	97	62	83	78	61	60	17
KERALA	301	83	96	23	26	23	33	36	19	20	21	23	33	33	26	4
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	1866	466	436	130	161	160	175	180	168	186	152	127	117	137	126	56
MAHARASHTRA	1918	520	421	145	157	145	190	231	185	145	112	112	123	130	132	36
MANIPUR	31	3	13	0	3	6	3	3	4	5	1	3	5	2	3	3
MEGHALAYA	20	4	10	2	2	2	2	2	0	2	1	1	0	0	5	5
MIZORAM	32	4	7	1	0	3	3	5	4	4	6	2	0	2	4	1
NAGALAND	13	3	5	0	1	3	2	0	1	1	1	0	3	1	0	1
ODISHA	957	224	233	76	57	65	101	107	98	113	63	86	78	61	70	24
PONDICHERRY	25	4	3	1	2	0	6	3	1	0	5	3	0	1	2	0
PUNJAB	520	153	224	23	29	24	39	40	46	56	46	60	97	64	50	13
RAJASTHAN	1607	401	438	124	167	137	128	137	145	137	121	133	135	135	128	40
SIKKIM	5	1	4	0	1	0	0	0	0	0	2	1	1	2	0	1
TAMIL NADU	817	225	229	57	73	53	91	67	47	55	81	70	64	81	79	5
TELANGANA	368	86	135	21	24	30	29	28	28	34	51	48	52	35	31	17
TRIPURA	25	8	6	1	4	3	1	3	4	1	0	0	1	2	3	0
UTTAR PRADESH	12951	2822	3416	777	949	1116	1081	1186	1717	1460	1164	988	955	992	1046	423
UTTARAKHAND	256	60	110	12	18	20	23	14	28	27	33	25	22	44	35	9
WEST BENGAL	2173	561	513	162	156	167	215	264	247	174	149	126	126	155	183	49
TOTAL	36446	9058	9598	2402	2813	2945	3214	3405	3944	3669	3037	2802	2806	2735	2967	1090

*0" means that report was received but no cases were identified

Data from weekly case based reports

Figure 1: Polio cases and SIAs

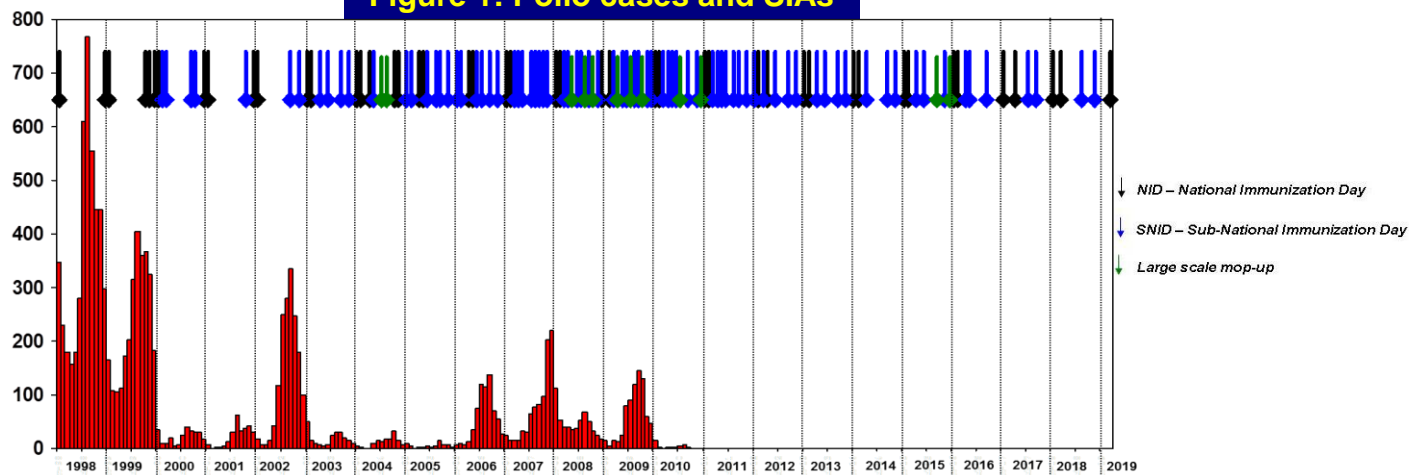


Table 2: AFP cases key surveillance indicators, 2017 - 2019

State/UT's	2017						2018						2019					
	#	VDPV	Compatible	Discarded (non-polio AFP)	Pending		#	VDPV	Compatible	Discarded (non-polio AFP)	Pending		#	VDPV	Compatible	Discarded (non-polio AFP)	Pending	
					Total	> 90 Days					Total	> 90 Days					Total	> 90 Days
A&N ISLANDS	2	0	0	2	0	0	8	0	0	8	0	0	1	0	0	0	1	1
ANDHRA PRADESH	339	0	0	339	0	0	419	0	0	408	11	11	104	0	0	84	20	0
ARUNACHAL PR.	11	0	0	11	0	0	10	0	0	10	0	0	7	0	0	5	2	1
ASSAM	308	0	3	305	0	0	271	0	0	270	1	1	71	0	0	58	13	2
BIHAR	8416	0	10	8406	0	0	7066	0	3	6994	69	69	1735	0	0	1410	325	21
CHANDIGARH	63	0	0	63	0	0	55	0	0	55	0	0	15	0	0	15	0	0
CHHATTISGARH	332	0	0	332	0	0	247	0	0	241	6	6	72	0	0	53	19	5
D&N HAVELI	7	0	0	7	0	0	3	0	0	3	0	0	1	0	0	1	0	0
DAMAN & DIU	12	0	0	12	0	0	4	0	0	4	0	0	2	0	0	1	1	0
DELHI	707	0	0	707	0	0	689	0	0	659	30	30	208	0	0	160	48	10
GOA	27	0	0	27	0	0	25	0	0	25	0	0	15	0	0	12	3	0
GUJARAT	993	0	1	992	0	0	938	0	0	922	16	16	268	0	0	224	44	4
HARYANA	964	0	0	964	0	0	822	0	0	806	16	16	220	0	0	175	45	8
HIMACHAL PRADESH	83	0	0	83	0	0	74	0	0	74	0	0	19	0	0	18	1	0
JAMMU & KASHMIR	301	0	0	301	0	0	209	0	0	209	0	0	57	0	0	49	8	0
JHARKHAND	909	0	0	909	0	0	871	0	0	856	15	15	288	0	0	224	64	12
KARNATAKA	663	0	1	662	0	0	850	0	1	840	9	9	216	0	0	178	38	4
KERALA	313	0	0	313	0	0	301	0	0	299	2	2	96	0	0	90	6	1
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	1755	0	1	1754	0	0	1866	0	1	1824	41	41	436	0	0	301	135	14
MAHARASHTRA	2284	0	1	2283	0	0	1918	0	0	1906	12	12	421	0	0	274	147	14
MANIPUR	33	0	0	33	0	0	31	0	0	31	0	0	13	0	0	8	5	0
MEGHALAYA	27	0	0	27	0	0	20	0	0	19	1	1	10	0	0	7	3	0
MIZORAM	30	0	0	30	0	0	32	0	0	31	1	1	7	0	0	7	0	0
NAGALAND	11	0	0	11	0	0	13	0	0	13	0	0	5	0	0	4	1	0
ODISHA	1225	0	1	1224	0	0	957	0	0	942	15	15	233	0	0	191	42	7
PONDICHERRY	11	0	0	11	0	0	25	0	0	25	0	0	3	0	0	3	0	0
PUNJAB	696	0	0	696	0	0	520	0	0	503	17	17	224	0	0	202	22	3
RAJASTHAN	1885	0	1	1884	0	0	1607	0	0	1558	49	49	438	0	0	345	93	19
SIKKIM	6	0	0	6	0	0	5	0	0	5	0	0	4	0	0	3	1	0
TAMIL NADU	549	0	0	549	0	0	817	0	0	816	1	1	229	0	0	216	13	2
TELANGANA	248	0	0	248	0	0	368	0	0	355	13	13	135	0	0	93	42	8
TRIPURA	51	0	0	51	0	0	25	0	0	23	2	2	6	0	0	4	2	0
UTTAR PRADESH	13114	0	14	13100	0	0	12951	0	5	12784	162	162	3416	0	0	2785	631	36
UTTARAKHAND	274	0	1	273	0	0	256	0	0	249	7	7	110	0	0	89	21	1
WEST BENGAL	2478	0	3	2475	0	0	2173	0	2	2140	31	31	513	0	0	451	62	7
TOTAL	39127	0	37	39090	0	0	36446	0	12	35907	527	527	9598	0	0	7740	1858	180

Table 3: AFP cases key surveillance indicators, 2017 - 2019

State/UT's	2017				2018				2019			
	Surveillance Indicators				Surveillance Indicators				Surveillance Indicators			
	Annualized Rates		Specimen		Annualized Rates		Specimen		Annualized Rates		Specimen	
	AFP rate	Non-polio AFP rate	% with 2 spec. w/in 14 days	% with any specimen	AFP rate	Non-polio AFP rate	% with 2 spec. w/in 14 days	% with any specimen	AFP rate	Non-polio AFP rate	% with 2 spec. w/in 14 days	% with any specimen
A&N ISLANDS	2.11	2.11	100	100	8.25	8.25	100	100	3	0.00	0	100
ANDHRA PRADESH	2.57	2.57	86	96	3.17	3.08	79	95	2.91	2.35	88	99
ARUNACHAL PR.	1.74	1.74	82	100	1.49	1.49	90	100	3.08	2.20	71	100
ASSAM	2.56	2.53	94	99	2.21	2.2	93	98	1.75	1.43	96	99
BIHAR	17.65	17.63	89	98	14.35	14.2	88	98	10.59	8.61	90	98
CHANDIGARH	13.64	13.64	89	100	11.7	11.7	96	98	14.07	14.07	100	100
CHHATTISGARH	2.99	2.99	73	96	2.25	2.19	67	95	2.7	1.99	71	94
D&N HAVELI	8.05	8.05	86	100	3.33	3.33	100	100	3.32	3.32	0	0
DAMAN & DIU	15.58	15.58	100	100	6.9	6.9	100	100	9.56	4.78	50	100
DELHI	12.72	12.72	83	97	11.82	11.3	80	97	10.68	8.22	82	95
GOA	6.46	6.46	74	96	5.9	5.9	60	96	10.7	8.56	93	100
GUJARAT	5.02	5.02	83	95	4.93	4.84	82	95	4.21	3.52	88	96
HARYANA	8.58	8.58	85	98	7.18	7.04	85	99	5.77	4.59	83	97
HIMACHAL PRADESH	4.02	4.02	84	98	3.53	3.53	84	99	2.74	2.59	100	100
JAMMU & KASHMIR	5.44	5.44	93	100	3.74	3.74	96	99	3.04	2.61	91	96
JHARKHAND	7.33	7.33	79	96	6.78	6.66	77	96	7.1	5.52	80	95
KARNATAKA	3.76	3.75	82	97	4.74	4.68	83	97	3.62	2.99	87	100
KERALA	3.63	3.63	91	100	3.47	3.45	90	99	3.37	3.16	95	100
LAKSHADWEEP	0.00	0.00	NA	NA	0	0	NA	NA	0	0.00	NA	NA
MADHYA PRADESH	5.38	5.38	81	97	5.62	5.49	81	97	3.95	2.72	82	97
MAHARASHTRA	6.85	6.85	83	98	5.68	5.65	81	97	3.77	2.45	75	96
MANIPUR	2.51	2.51	97	100	2.9	2.9	94	97	3.69	2.27	92	92
MEGHALAYA	1.85	1.85	85	100	1.33	1.26	80	100	1.98	1.38	80	100
MIZORAM	6.59	6.59	80	100	7.31	7.08	72	100	5.01	5.01	86	100
NAGALAND	1.51	1.51	73	91	1.99	1.99	62	85	2.09	1.67	100	100
ODISHA	9.38	9.37	88	99	7.33	7.21	86	99	5.32	4.36	86	97
PONDICHERRY	3.41	3.41	91	100	7.65	7.65	96	100	2.76	2.76	100	100
PUNJAB	9.00	9.00	84	97	6.63	6.42	80	96	8.63	7.78	91	98
RAJASTHAN	7.63	7.63	83	97	6.39	6.2	85	96	5.24	4.13	86	98
SIKKIM	2.62	2.62	83	100	2.16	2.16	100	100	5.16	3.87	100	100
TAMIL NADU	3.11	3.11	95	99	4.61	4.61	94	99	3.99	3.77	96	100
TELANGANA	2.36	2.36	72	96	3.57	3.44	69	97	3.95	2.72	67	94
TRIPURA	3.96	3.96	86	100	2.51	2.3	92	100	1.81	1.21	67	100
UTTAR PRADESH	14.72	14.70	86	98	14.27	14.09	84	97	11.31	9.22	88	98
UTTARAKHAND	6.09	6.06	84	98	5.58	5.43	73	95	7.2	5.83	89	98
WEST BENGAL	8.05	8.04	91	99	7.03	6.92	91	99	5.41	4.76	92	99
TOTAL	8.93	8.92	86	98	8.22	8.10	85	97	6.64	5.36	87	98

Figure 2: Timeliness of Reporting Units

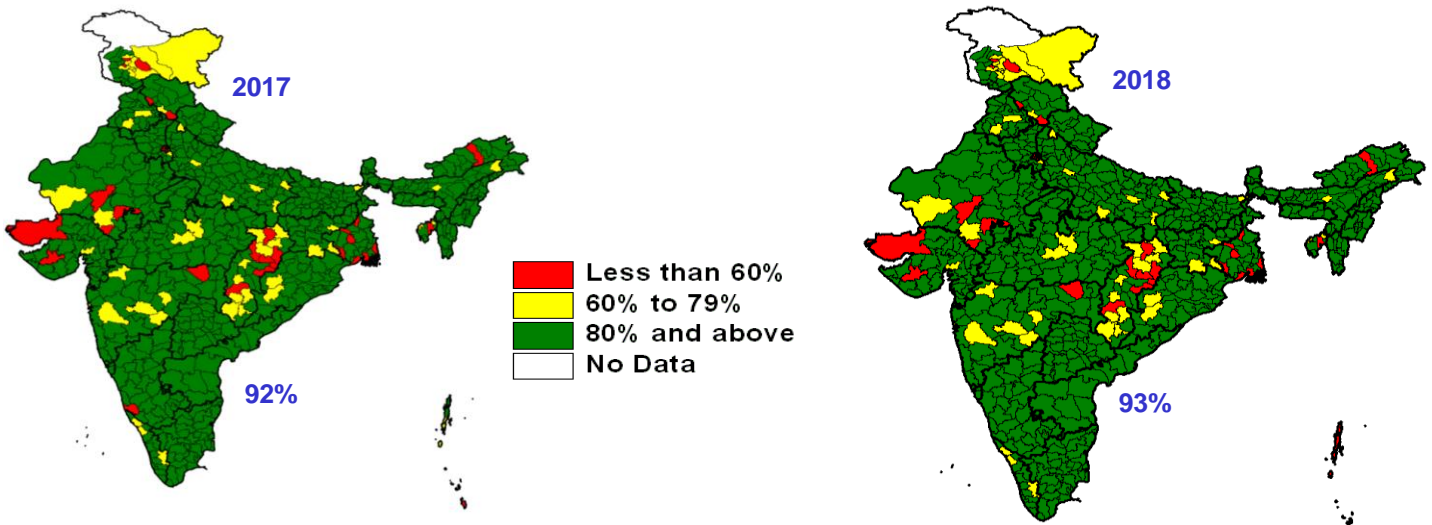


Figure 3: Non-polio AFP rate

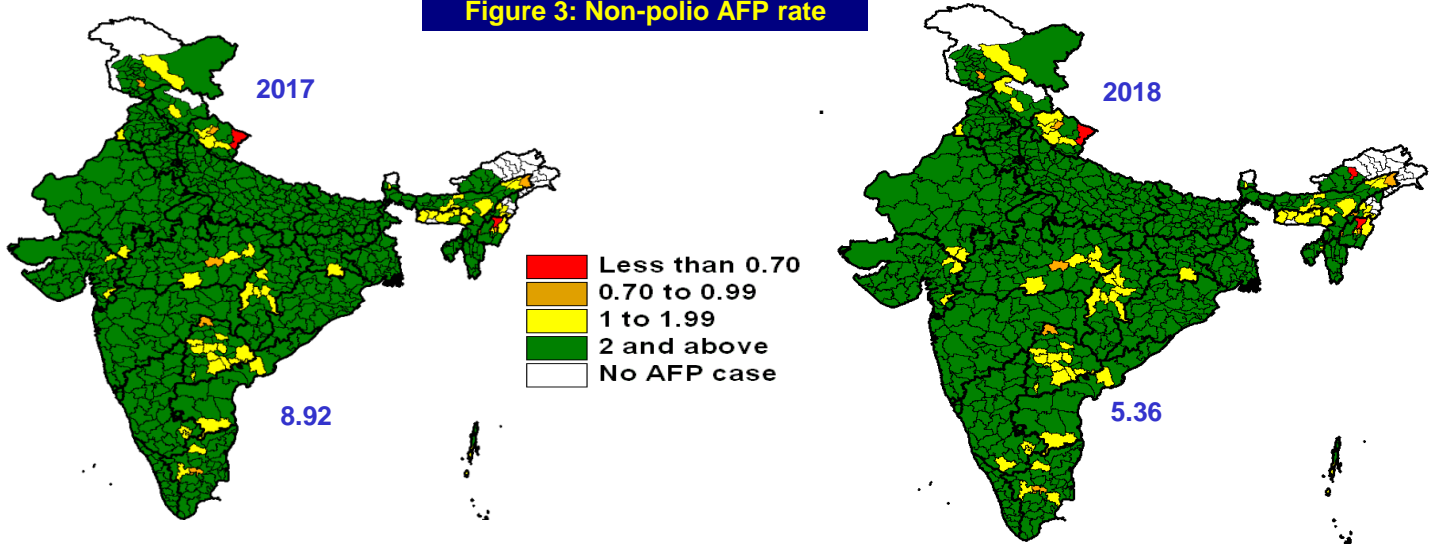


Figure 4: Stool collection within 14 days

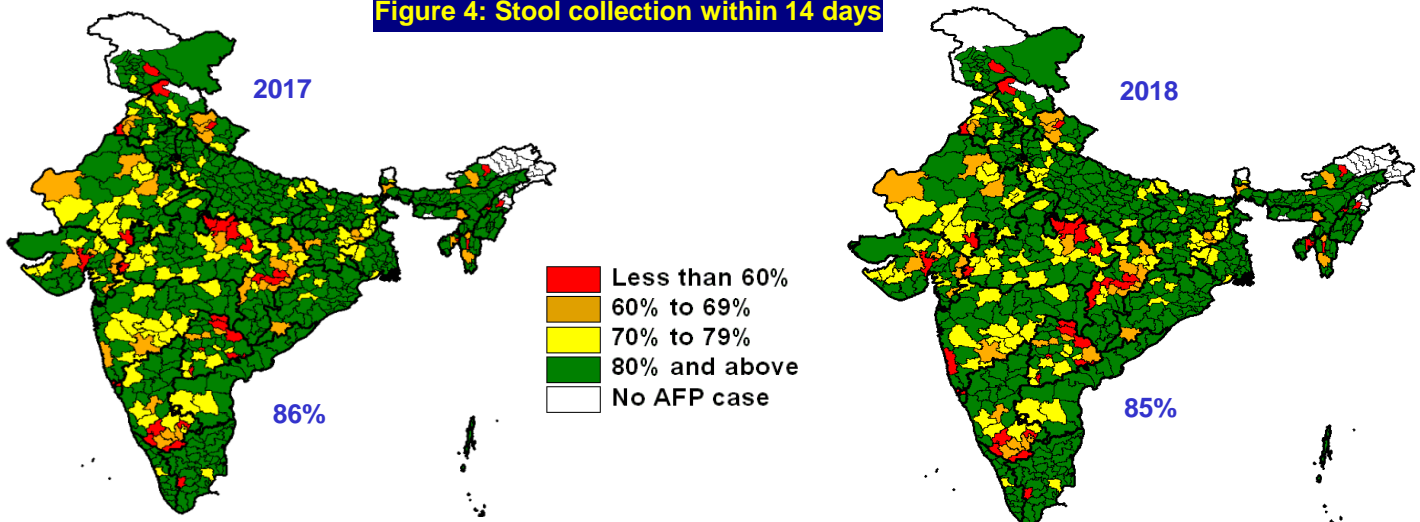
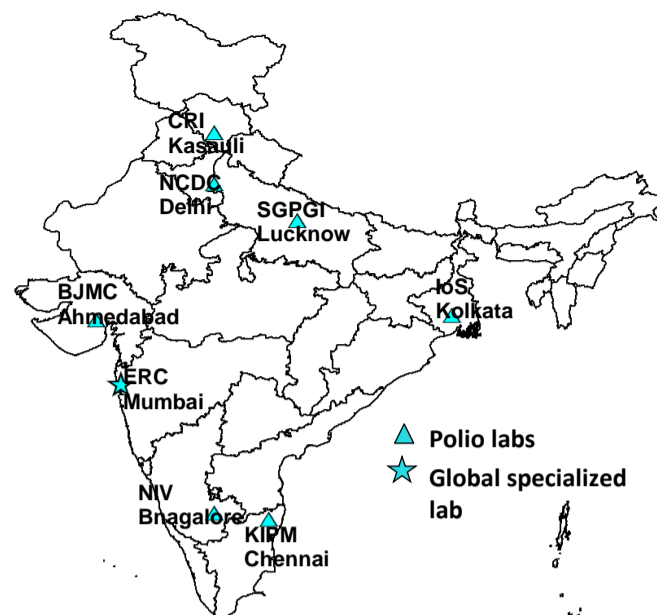


Table 4: Primary isolation results of AFP cases

2019								
Polio Laboratories	Number of AFP cases with stool specimens	Number of AFP cases with laboratory result as				Number of cases pending for		Number of specimens received by lab
		Culture positive for poliovirus	Culture positive for polio virus and NPEV	NPEV	No polio virus or NPEV	<=14 days	>14 days	
BJMC, Ahmedabad	1280	47	1	122	990	119	1	2565
NIV, Bangalore	746	18	1	83	586	58	0	1491
ERC, Mumbai	687	29	0	65	593	0	0	1362
IoS, Kolkata	1238	49	2	84	1040	63	0	2474
NCDC, Delhi	1588	95	3	103	1360	27	0	3139
CRI, Kasauli	390	6	0	25	347	12	0	787
KIPM, Chennai	911	17	0	83	810	1	0	1815
SGPGI, Lucknow	2008	123	2	158	1549	176	0	4026
TOTAL	8848	384	9	723	7275	456	1	17659

Figure 5: Polio laboratory network



2018								
Polio Laboratories	Number of AFP cases with stool specimens	Number of AFP cases with laboratory result as				Number of cases pending for		Number of specimens received by lab
		Culture positive for poliovirus	Culture positive for polio virus and NPEV	NPEV	No polio virus or NPEV	<=14 days	>14 days	
BJMC, Ahmedabad	4722	191	27	942	3562	0	0	9453
NIV, Bangalore	3107	104	13	816	2174	0	0	6233
ERC, Mumbai	3715	113	11	800	2791	0	0	7435
IoS, Kolkata	4996	155	12	847	3982	0	0	9986
NCDC, Delhi	6145	143	15	857	5130	0	0	12279
CRI, Kasauli	1779	19	1	202	1557	0	0	3565
KIPM, Chennai	3783	82	4	625	3072	0	0	7556
SGPGI, Lucknow	7236	136	16	1294	5790	0	0	14707
TOTAL	35483	943	99	6383	28058	0	0	71214

Table 5: Intratypic differentiation (ITD) of isolates from AFP cases

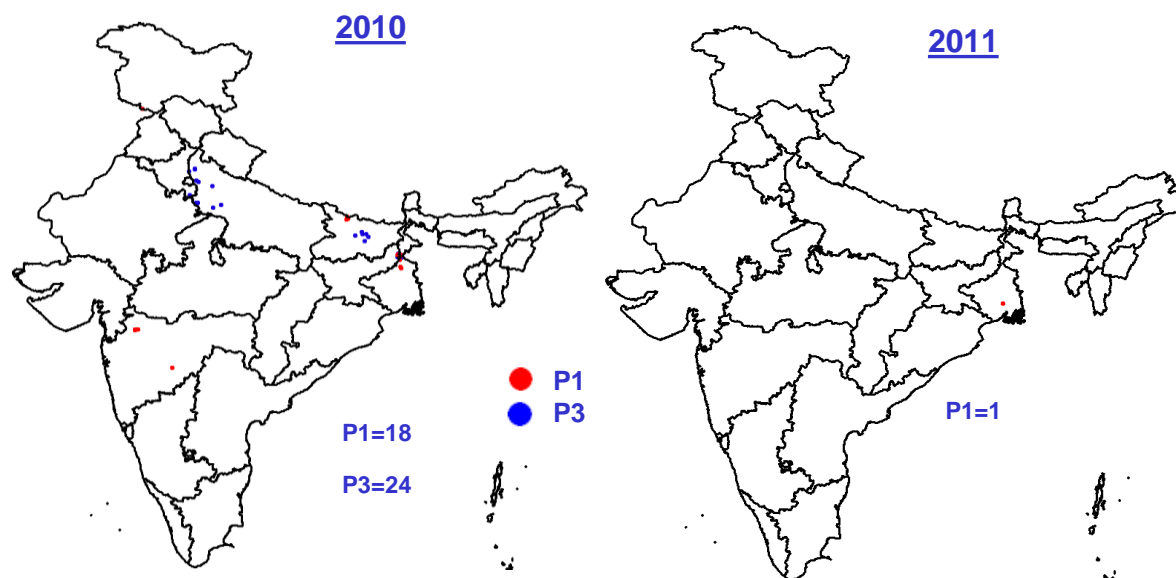
2019																		
Polio Laboratories	Number of AFP cases referred for ITD	Number of AFP cases with ITD result as														Number of cases pending for		
		Wild poliovirus				Vaccine poliovirus				VDPV			NPEV by PCR	Non enterovirus	Negative	<=7 days	8-14 days	>14 days
		Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3						
BJMC, Ahmedabad	48	0	0	0	0	9	0	10	19	0	0	0	2	0	0	8	0	0
NIV, Bangalore	19	0	0	0	0	6	0	9	1	0	0	0	0	0	0	3	0	0
ERC, Mumbai	29	0	0	0	0	12	0	4	4	0	0	0	1	0	0	8	0	0
IoS, Kolkata	51	0	0	0	0	20	0	10	17	0	0	0	0	0	0	4	0	0
NCDC, Delhi	98	0	0	0	0	17	0	34	39	0	0	0	2	0	0	6	0	0
CRI, Kasauli	6	0	0	0	0	1	0	3	2	0	0	0	0	0	0	0	0	0
KIPM, Chennai	17	0	0	0	0	6	0	5	6	0	0	0	0	0	0	0	0	0
SGPGI, Lucknow	125	0	0	0	0	30	0	31	50	0	0	0	1	1	0	12	0	0
TOTAL	393	0	0	0	0	101	0	106	138	0	0	0	6	1	0	41	0	0

2018																		
Polio Laboratories	Number of AFP cases referred for ITD	Number of AFP cases with ITD result as														Number of cases pending for		
		Wild poliovirus				Vaccine poliovirus				VDPV			NPEV by PCR	Non enterovirus	Negative	<=7 days	8-14 days	>14 days
		Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3						
BJMC, Ahmedabad	219	0	0	0	0	50	0	70	93	0	0	0	6	0	0	0	0	0
NIV, Bangalore	117	0	0	0	0	29	0	42	40	0	0	0	6	0	0	0	0	0
ERC, Mumbai	124	0	0	0	0	30	0	41	34	0	0	0	19	0	0	0	0	0
IoS, Kolkata	167	0	0	0	0	48	0	48	60	0	0	0	10	1	0	0	0	0
NCDC, Delhi	157	0	0	0	0	41	0	71	43	0	0	0	2	0	0	0	0	0
CRI, Kasauli	20	0	0	0	0	5	0	6	9	0	0	0	0	0	0	0	0	0
KIPM, Chennai	85	0	0	0	0	23	0	31	31	0	0	0	0	0	0	0	0	0
SGPGI, Lucknow	153	0	0	0	0	45	1	56	49	0	0	0	1	0	1	0	0	0
TOTAL	1042	0	0	0	0	271	1	365	359	0	0	0	44	1	1	0	0	0

Table 6: Most recent Wild Polio Virus case by State

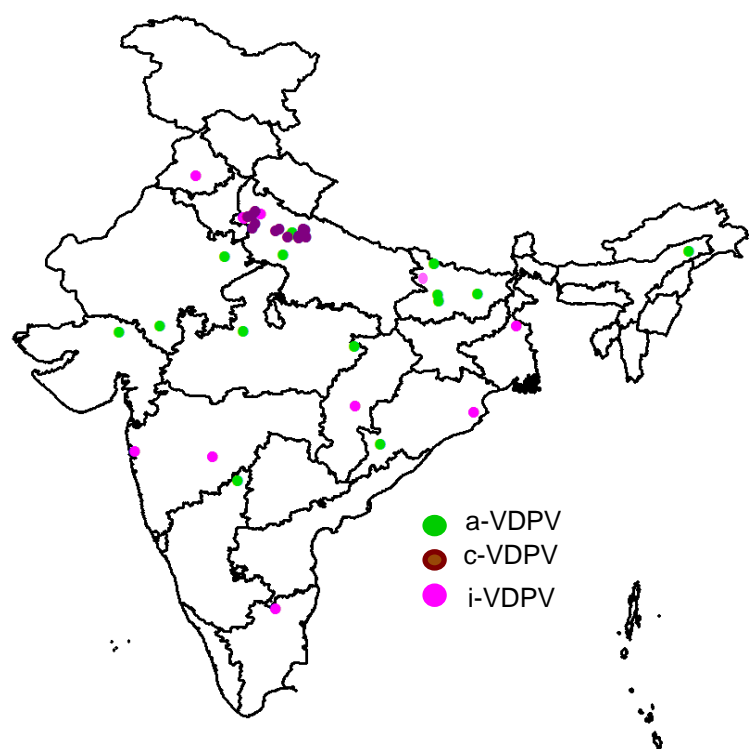
State	Date of most recent polio case	Type
West Bengal	13-Jan-11	P1
Jharkhand	22-Oct-10	P3
Maharashtra	16-Sep-10	P1
Bihar	01-Sep-10	P1
Uttar Pradesh	21-Apr-10	P3
Jammu & Kashmir	07-Feb-10	P1
Haryana	13-Jan-10	P3
Rajasthan	27-Nov-09	P3
Uttarakhand	06-Nov-09	P3
Himachal Pradesh	17-Oct-09	P3
Punjab	13-Oct-09	P3
Delhi	28-Jun-09	P3
Madhya Pradesh	04-Aug-08	P3
Odisha	22-Jul-08	P3
Andhra Pradesh	16-Jul-08	P3
Assam	09-Jun-08	P1
Karnataka	03-Nov-07	P3
Gujarat	16-Mar-07	P1
Telangana	03-Jul-07	P1
Chandigarh	02-Aug-06	P1
Tamil Nadu	18-Feb-04	P1
Chhattisgarh	18-Jul-02	P1
Kerala	29-Sep-00	P1
Pondicherry	26-Nov-98	P1
Goa	28-Oct-98	P1
Daman & Diu	22-Oct-98	P1
D & N Haveli	31-Jan-98	P1
Nagaland	10-Dec-97	P1&P3
Meghalaya	15-Oct-97	P1
Tripura	10-Oct-97	P1
A&N Islands	Before 1997	
Arunachal Pradesh	Before 1997	
Lakshadweep	Before 1997	
Manipur	Before 1997	
Mizoram	Before 1997	
Sikkim	Before 1997	

Figure 6: Wild Polio cases, India



Month	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	112	36	36	7	18	51	4	10	8	24	112	14	16	1	0	0	0	0	0	0	0	0
February	32	22	10	1	8	16	3	5	9	14	53	5	3	0	0	0	0	0	0	0	0	0
March	42	11	10	3	7	9	1	1	8	14	40	16	0	0	0	0	0	0	0	0	0	0
April	26	8	20	3	16	7	1	2	13	14	40	13	2	0	0	0	0	0	0	0	0	0
May	49	39	6	4	42	5	9	2	36	32	34	24	2	0	0	0	0	0	0	0	0	0
June	118	69	8	13	117	7	14	6	76	30	38	79	2	0	0	0	0	0	0	0	0	0
July	324	142	25	30	251	25	13	3	121	64	53	89	5	0	0	0	0	0	0	0	0	0
August	418	187	39	62	280	29	18	6	114	78	67	119	7	0	0	0	0	0	0	0	0	0
September	283	193	32	33	334	30	18	14	137	82	49	145	3	0	0	0	0	0	0	0	0	0
October	170	195	31	38	247	20	32	7	71	98	32	129	1	0	0	0	0	0	0	0	0	0
November	226	155	31	43	180	16	14	7	55	203	24	60	0	0	0	0	0	0	0	0	0	0
December	134	69	17	31	100	10	7	3	28	221	17	48	1	0	0	0	0	0	0	0	0	0
Total	1934	1126	265	268	1600	225	134	66	676	874	559	741	42	1	0	0	0	0	0	0	0	0

Figure 7: Vaccine-derived Poliovirus in AFP cases, India, 2009 - 2019



Year	type 1		type 2			type 3
	a	i	a	c	i	i
2009	1	1	4	15		
2010			1	3	1	
2011			4		2	1
2012					1	
2013			2		3	
2014			3			
2015			1		1	
2016					1	
2017						
2018						
2019						
Total	1	1	15	18	9	1

