

AFP Surveillance Bulletin - India

Report for week 6, ending 9 February 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 6, 2018	AFP cases as on week 6, 2019	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19
A&N ISLANDS	8	0	0	1	2	0	2	0	0	1	0	1	0	0	0	0
ANDHRA PRADESH	421	33	33	27	32	31	42	25	35	39	32	38	32	43	32	1
ARUNACHAL PR.	10	0	2	0	2	0	0	0	0	1	0	0	5	2	2	0
ASSAM	269	16	16	22	25	18	24	28	29	15	22	16	15	35	16	0
BIHAR	7057	543	384	552	557	456	540	582	621	608	689	734	603	496	376	8
CHANDIGARH	55	3	4	4	6	5	3	1	4	5	8	7	3	5	4	0
CHHATTISGARH	246	13	20	22	17	18	16	20	17	22	27	22	15	22	20	0
D&N HAVELI	3	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0
DAMAN & DIU	4	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
DELHI	686	58	69	37	54	58	69	48	51	51	63	56	63	64	69	0
GOA	24	1	3	3	0	1	1	4	2	1	3	3	1	4	3	0
GUJARAT	938	68	70	93	96	75	67	82	92	83	78	57	49	69	69	1
HARYANA	819	34	41	81	49	50	52	55	59	67	95	112	74	63	41	0
HIMACHAL PRADESH	74	8	7	15	5	6	3	3	3	8	4	2	10	6	7	0
JAMMU & KASHMIR	209	10	7	16	22	20	19	18	14	22	20	8	15	17	7	0
JHARKHAND	867	47	76	67	85	63	64	63	72	89	77	97	68	62	76	0
KARNATAKA	845	34	54	49	53	48	81	62	95	87	82	97	62	79	54	0
KERALA	301	16	14	25	25	23	26	23	33	36	19	20	21	23	14	0
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	1861	115	79	142	129	130	162	160	175	181	168	184	151	123	79	0
MAHARASHTRA	1901	126	68	176	145	146	159	145	188	231	184	143	111	96	68	0
MANIPUR	31	0	3	1	2	0	3	6	3	3	4	5	1	3	3	0
MEGHALAYA	20	3	0	1	2	2	2	2	2	2	0	2	1	1	0	0
MIZORAM	32	0	0	0	3	1	0	3	3	5	4	4	6	2	0	0
NAGALAND	13	2	3	2	1	0	1	3	2	0	1	1	1	0	3	0
ODISHA	957	55	68	68	60	77	57	65	101	106	98	113	63	86	68	0
PONDICHERRY	25	2	0	0	2	1	2	0	6	3	1	0	5	3	0	0
PUNJAB	516	37	72	50	31	23	29	24	39	39	46	56	44	59	72	0
RAJASTHAN	1604	90	110	130	119	124	167	138	128	137	145	136	120	131	110	0
SIKKIM	5	0	0	0	1	0	1	0	0	0	0	0	2	1	0	0
TAMIL NADU	814	34	52	67	92	57	73	53	91	66	45	56	81	69	51	1
TELANGANA	366	19	37	26	24	21	24	30	29	27	28	34	50	48	36	1
TRIPURA	25	0	0	2	4	1	4	3	1	3	4	1	0	0	0	0
UTTAR PRADESH	12939	758	787	801	815	782	952	1121	1082	1188	1713	1447	1157	972	781	6
UTTARAKHAND	253	7	19	19	20	12	18	20	23	14	28	27	33	22	18	1
WEST BENGAL	2170	141	85	180	164	162	156	167	215	264	247	174	149	123	84	1
TOTAL	36368	2273	2183	2679	2645	2411	2820	2954	3215	3404	3936	3653	3012	2730	2163	20

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

Data from weekly case based reports

Figure 1: Polio cases and SIAs

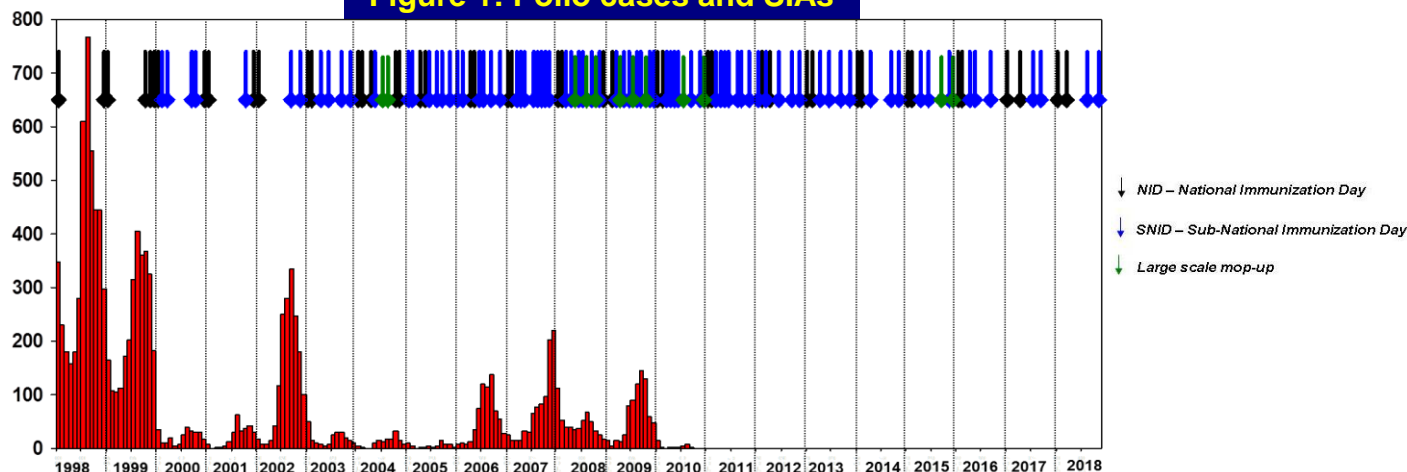


Table 2: AFP cases key surveillance indicators,2017 - 2019

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
AFP Cases							AFP Cases						AFP Cases					
A&N ISLANDS	2	0	0	2	0	0	8	0	0	8	0	0	0	0	0	0	0	0
ANDHRA PRADESH	339	0	0	339	0	0	421	0	0	398	23	16	33	0	0	8	25	0
ARUNACHAL PR.	11	0	0	11	0	0	10	0	0	10	0	0	2	0	0	1	1	0
ASSAM	308	0	3	305	0	0	269	0	0	257	12	4	16	0	0	10	6	0
BIHAR	8416	0	10	8406	0	0	7057	0	1	6846	210	130	384	0	0	182	202	0
CHANDIGARH	63	0	0	63	0	0	55	0	0	55	0	0	4	0	0	2	2	0
CHHATTISGARH	332	0	0	332	0	0	246	0	0	226	20	9	20	0	0	8	12	0
D&N HAVELI	7	0	0	7	0	0	3	0	0	3	0	0	0	0	0	0	0	0
DAMAN & DIU	12	0	0	12	0	0	4	0	0	4	0	0	0	0	0	0	0	0
DELHI	707	0	0	707	0	0	686	0	0	627	59	35	69	0	0	19	50	0
GOA	27	0	0	27	0	0	24	0	0	20	4	4	3	0	0	0	3	0
GUJARAT	993	0	1	992	0	0	938	0	0	893	45	35	70	0	0	39	31	0
HARYANA	964	0	0	964	0	0	819	0	0	768	51	35	41	0	0	22	19	0
HIMACHAL PRADESH	83	0	0	83	0	0	74	0	0	69	5	3	7	0	0	3	4	0
JAMMU & KASHMIR	301	0	0	301	0	0	209	0	0	207	2	1	7	0	0	3	4	0
JHARKHAND	909	0	0	909	0	0	867	0	0	792	75	50	76	0	0	48	28	0
KARNATAKA	663	0	1	662	0	0	845	0	0	799	46	24	54	0	0	27	27	0
KERALA	313	0	0	313	0	0	301	0	0	290	11	8	14	0	0	13	1	0
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	1861	0	1	1724	136	101	79	0	0	38	41	0
MAHARASHTRA	2284	0	1	2283	0	0	1901	0	0	1692	209	168	68	0	0	32	36	0
MANIPUR	33	0	0	33	0	0	31	0	0	29	2	1	3	0	0	2	1	0
MEGHALAYA	27	0	0	27	0	0	20	0	0	18	2	1	0	0	0	0	0	0
MIZORAM	30	0	0	30	0	0	32	0	0	30	2	0	0	0	0	0	0	0
NAGALAND	11	0	0	11	0	0	13	0	0	11	2	2	3	0	0	0	3	0
ODISHA	1225	0	1	1224	0	0	957	0	0	892	65	29	68	0	0	32	36	0
PONDICHERRY	11	0	0	11	0	0	25	0	0	25	0	0	0	0	0	0	0	0
PUNJAB	696	0	0	696	0	0	516	0	0	481	35	24	72	0	0	43	29	0
RAJASTHAN	1885	0	1	1884	0	0	1604	0	0	1514	90	63	110	0	0	57	53	0
SIKKIM	6	0	0	6	0	0	5	0	0	4	1	0	0	0	0	0	0	0
TAMIL NADU	549	0	0	549	0	0	814	0	0	798	16	10	52	0	0	14	38	0
TELANGANA	248	0	0	248	0	0	366	0	0	336	30	9	37	0	0	0	37	0
TRIPURA	51	0	0	51	0	0	25	0	0	22	3	3	0	0	0	0	0	0
UTTAR PRADESH	13114	0	14	13100	0	0	12939	0	4	12364	571	327	787	0	0	330	457	0
UTTARAKHAND	274	0	1	273	0	0	253	0	0	233	20	12	19	0	0	6	13	0
WEST BENGAL	2478	0	3	2475	0	0	2170	0	2	2093	75	44	85	0	0	51	34	0
TOTAL	39127	0	37	39090	0	0	36368	0	8	34538	1822	1148	2183	0	0	990	1193	0

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	0	0.00	NA	NA
ANDHRA PRADESH	2.57	2.57	86	96	3.18	3.01	79	95	2.16	0.52	91	97
ARUNACHAL PR.	1.74	1.74	82	100	1.49	1.49	90	100	2.58	1.29	100	100
ASSAM	2.56	2.53	94	99	2.2	2.1	94	99	1.13	0.71	100	100
BIHAR	17.65	17.63	89	98	14.33	13.9	88	98	6.76	3.20	89	94
CHANDIGARH	13.64	13.64	89	100	11.7	11.7	96	98	7.38	3.69	75	75
CHHATTISGARH	2.99	2.99	73	96	2.24	2.06	67	95	1.58	0.63	55	80
D&N HAVELI	8.05	8.05	86	100	3.33	3.33	100	100	0	0.00	NA	NA
DAMAN & DIU	15.58	15.58	100	100	6.9	6.9	100	100	0	0.00	NA	NA
DELHI	12.72	12.72	83	97	11.76	10.75	80	97	10.26	2.82	80	88
GOA	6.46	6.46	74	96	5.66	4.72	62	100	6.13	0.00	100	100
GUJARAT	5.02	5.02	83	95	4.93	4.69	82	95	3.19	1.78	86	90
HARYANA	8.58	8.58	85	98	7.15	6.71	84	99	3.1	1.66	85	88
HIMACHAL PRADESH	4.02	4.02	84	98	3.53	3.29	84	99	2.89	1.24	100	100
JAMMU & KASHMIR	5.44	5.44	93	100	3.74	3.7	96	99	1.08	0.46	100	100
JHARKHAND	7.33	7.33	79	96	6.75	6.16	77	96	5.13	3.24	87	96
KARNATAKA	3.76	3.75	82	97	4.71	4.46	83	97	2.61	1.30	85	96
KERALA	3.63	3.63	91	100	3.47	3.35	90	99	1.4	1.30	100	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	5.6	5.19	81	97	2.06	0.99	85	96
MAHARASHTRA	6.85	6.85	83	98	5.63	5.01	81	98	1.75	0.82	72	93
MANIPUR	2.51	2.51	97	100	2.9	2.72	94	97	2.43	1.62	100	100
MEGHALAYA	1.85	1.85	85	100	1.33	1.2	80	100	0	0.00	NA	NA
MIZORAM	6.59	6.59	80	100	7.31	6.85	72	100	0	0.00	NA	NA
NAGALAND	1.51	1.51	73	91	1.99	1.68	62	85	3.98	0.00	67	67
ODISHA	9.38	9.37	88	99	7.33	6.83	86	99	4.51	2.12	75	87
PONDICHERRY	3.41	3.41	91	100	7.65	7.65	96	100	0	0.00	NA	NA
PUNJAB	9.00	9.00	84	97	6.58	6.14	81	97	7.96	4.75	93	97
RAJASTHAN	7.63	7.63	83	97	6.38	6.02	85	96	3.79	1.96	83	94
SIKKIM	2.62	2.62	83	100	2.16	1.72	100	100	0	0.00	NA	NA
TAMIL NADU	3.11	3.11	95	99	4.6	4.51	94	99	2.54	0.69	92	96
TELANGANA	2.36	2.36	72	96	3.55	3.26	69	98	3.11	0.00	57	84
TRIPURA	3.96	3.96	86	100	2.51	2.2	92	100	0	0.00	NA	NA
UTTAR PRADESH	14.72	14.70	86	98	14.26	13.62	84	97	7.52	3.15	88	97
UTTARAKHAND	6.09	6.06	84	98	5.52	5.08	74	95	3.59	1.13	79	95
WEST BENGAL	8.05	8.04	91	99	7.02	6.77	91	99	2.38	1.43	87	99
TOTAL	8.93	8.92	86	98	8.20	7.79	85	98	4.27	1.93	86	95

Figure 2: Timeliness of Reporting Units

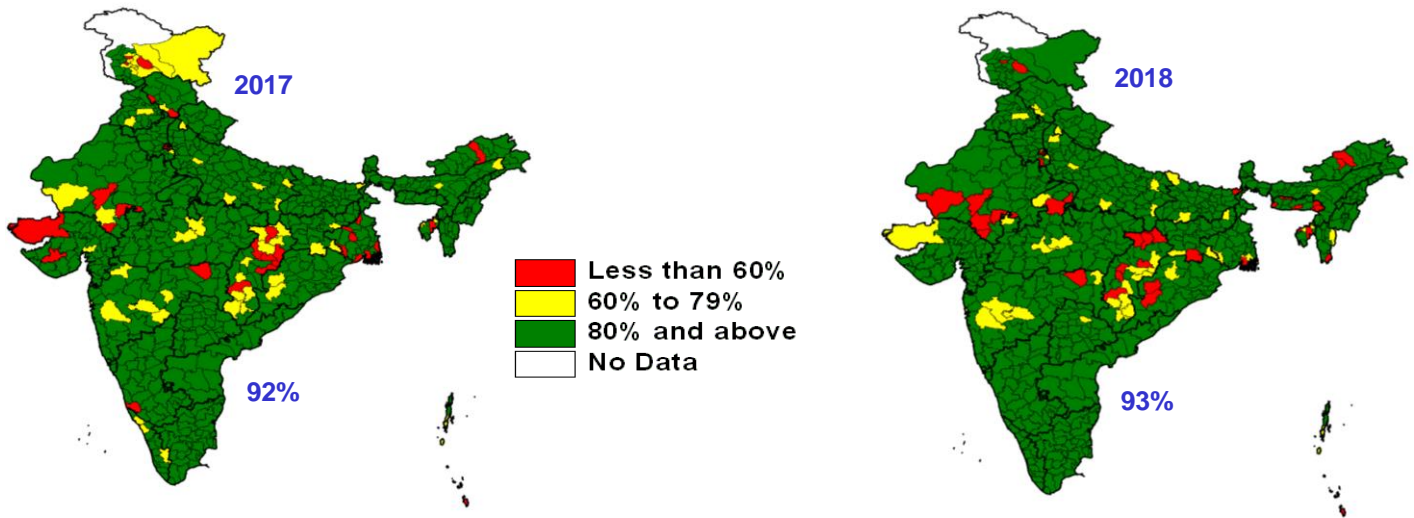


Figure 3: Non-polio AFP rate

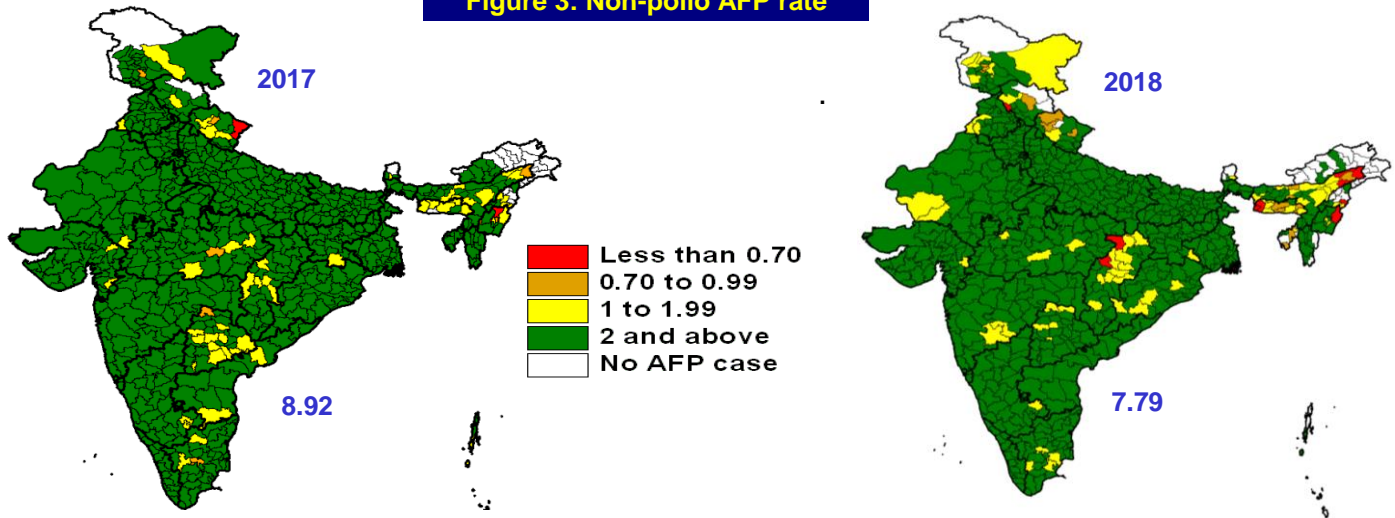
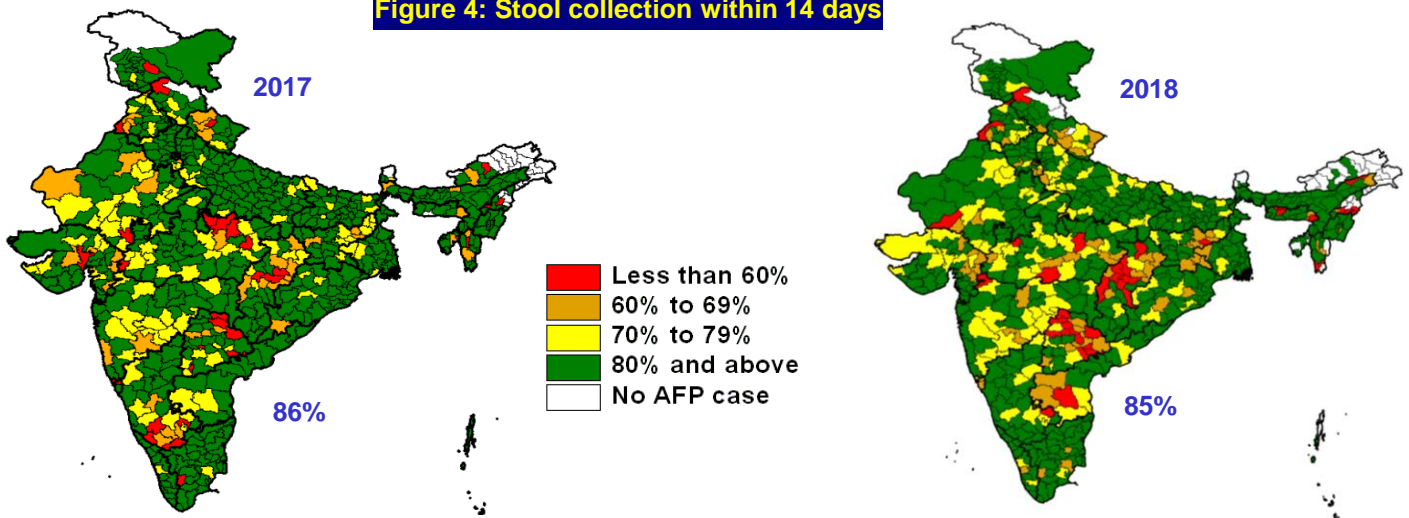
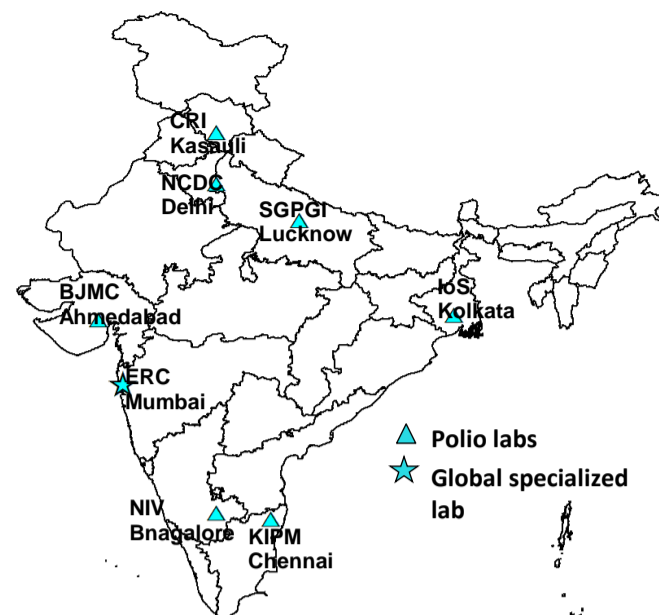


Figure 4: Stool collection within 14 days



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	265	2	0	9	157	97	0	521
NIV, Bangalore	149	1	0	8	89	48	3	289
ERC, Mumbai	112	1	0	8	66	36	1	228
IoS, Kolkata	219	1	0	9	171	38	0	430
NCDC, Delhi	220	0	0	10	127	0	83	432
CRI, Kasauli	94	0	0	1	62	17	14	187
KIPM, Chennai	79	1	0	6	72	0	0	150
SGPGI, Lucknow	348	3	0	10	235	77	23	683
TOTAL	1486	9	0	61	979	313	124	2920

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	4720	192	27	938	3560	1	2	9445
NIV, Bangalore	3100	104	13	816	2166	1	0	6220
ERC, Mumbai	3676	113	11	794	2755	3	0	7349
IoS, Kolkata	4943	155	12	838	3936	2	0	9865
NCDC, Delhi	6118	141	16	854	5093	0	14	12223
CRI, Kasauli	1776	19	1	201	1553	0	2	3558
KIPM, Chennai	3762	82	4	622	3054	0	0	7509
SGPGI, Lucknow	7234	136	16	1294	5783	5	0	14699
TOTAL	35329	942	100	6357	27900	12	18	70868

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

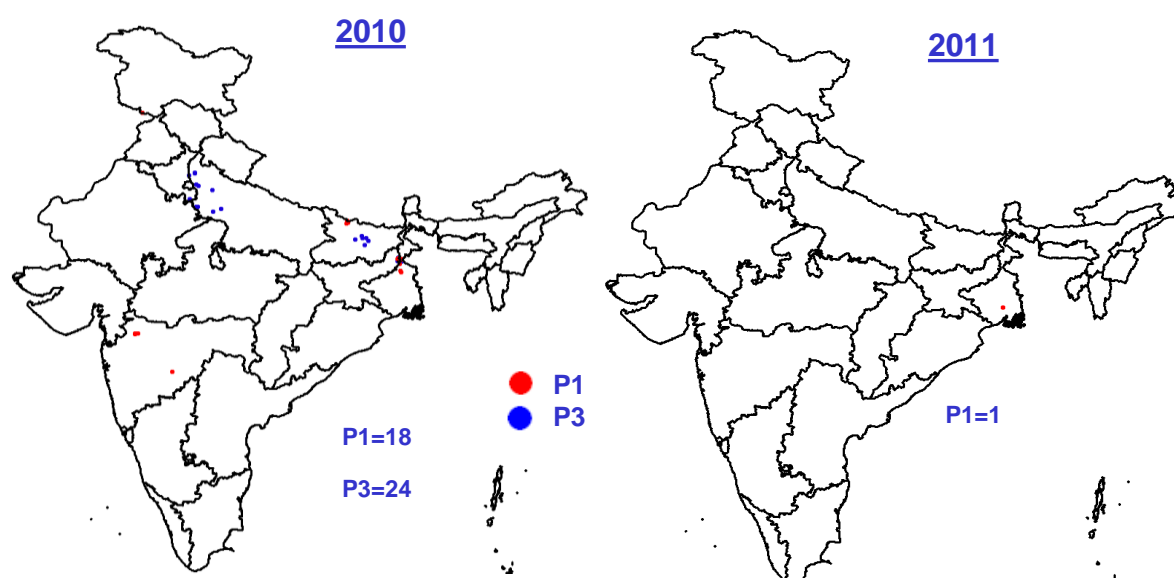
2019																			
Polio Laboratories	Number of AFP cases referred for ITD	Number of AFP cases with ITD result as														Number of cases pending for			
		Wild poliovirus				Vaccine poliovirus				VDPV			NPEV by PCR	Non enterovirus	Negative	<=7 days	8-14 days	>14 days	
		Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3							
BJMC, Ahmedabad	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
NIV, Bangalore	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ERC, Mumbai	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
IoS, Kolkata	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
NCDC, Delhi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRI, Kasauli	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KIPM, Chennai	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
SGPGI, Lucknow	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
TOTAL	9	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	1	4	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	220	0	0	0	0	50	0	70	94	0	0	0	6	0	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	0
ERC, Mumbai	124	0	0	0	0	30	0	41	34	0	0	0	19	0	0	0	0	0	0
IoS, Kolkata	167	0	0	0	0	47	0	49	60	0	0	0	10	1	0	0	0	0	0
NCDC, Delhi	156	0	0	0	0	42	0	70	43	0	0	0	1	0	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	0
KIPM, Chennai	85	0	0	0	0	23	0	31	31	0	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	0
TOTAL	1042	0	0	0	0	271	1	365	360	0	0	0	43	1	1	0	0	0	

Table 6: Most recent Wild Polio Virus case by State

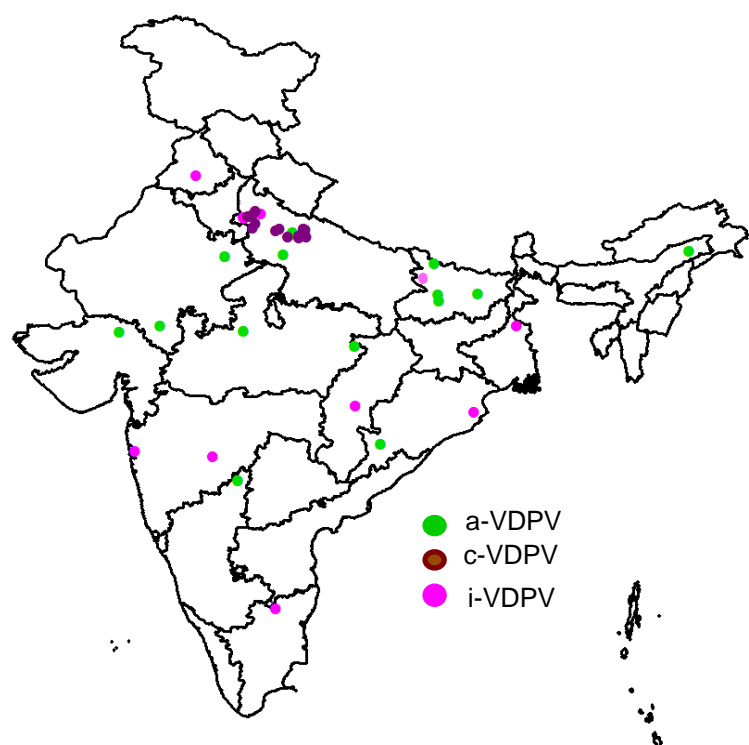
State	Date of most recent polio case	Type
West Bengal	13-Jan-11	P1
Jharkhand	22-Oct-10	P3
Maharashtra	16-Sep-10	P1
Bihar	01-Sep-10	P1
Uttar Pradesh	21-Apr-10	P3
Jammu & Kashmir	07-Feb-10	P1
Haryana	13-Jan-10	P3
Rajasthan	27-Nov-09	P3
Uttarakhand	06-Nov-09	P3
Himachal Pradesh	17-Oct-09	P3
Punjab	13-Oct-09	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

