

AFP Surveillance Bulletin - India

Report for week 38, ending 22 September 2018

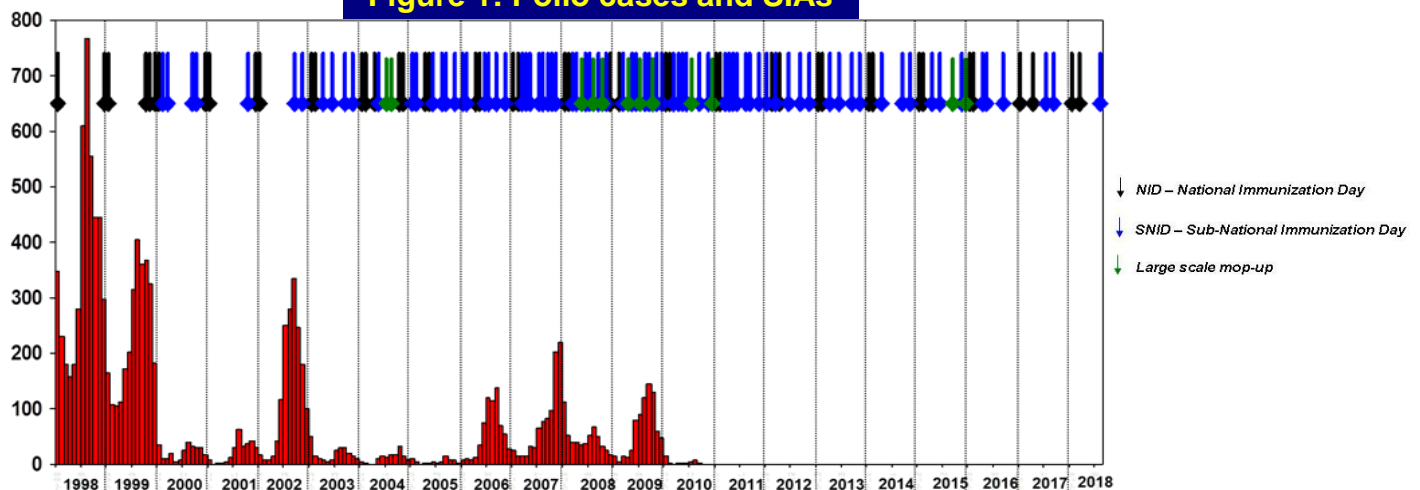
Table 1: AFP cases by month of paralysis onset, last 13 months

State/UT's	Total AFP cases in 2017	AFP cases as on week 38, 2017	AFP cases as on week 38, 2018	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18
A&N ISLANDS	2	2	6	0	0	0	0	1	1	2	0	2	0	0	0	0
ANDHRA PRADESH	339	211	284	32	42	32	26	45	27	32	31	40	25	34	38	12
ARUNACHAL PR.	11	9	3	0	1	1	0	0	0	2	0	0	0	0	1	0
ASSAM	308	218	187	24	25	21	24	20	22	25	18	24	28	29	15	6
BIHAR	8416	5950	4720	769	683	700	640	624	554	562	457	540	581	614	569	219
CHANDIGARH	63	45	35	7	5	4	4	4	4	6	5	3	1	4	5	3
CHHATTISGARH	332	241	161	30	28	20	15	28	22	17	19	16	20	15	19	5
D&N HAVELI	7	4	3	2	0	2	0	0	0	1	0	1	0	0	0	1
DAMAN & DIU	12	6	2	1	2	2	0	2	0	0	0	0	0	0	0	0
DELHI	707	509	460	42	52	51	61	72	37	56	58	68	47	50	48	24
GOA	27	21	13	2	1	2	0	1	3	0	1	1	4	2	1	0
GUJARAT	993	732	706	109	60	75	53	96	93	94	75	68	82	92	78	28
HARYANA	964	651	463	101	80	74	73	62	81	49	51	52	56	55	49	8
HIMACHAL PRADESH	83	57	56	9	9	3	4	9	15	5	6	3	3	3	8	4
JAMMU & KASHMIR	301	185	145	32	28	33	19	18	16	22	20	19	18	13	19	0
JHARKHAND	909	645	557	72	84	73	62	61	67	83	64	66	60	71	75	10
KARNATAKA	663	475	530	60	60	40	45	49	49	53	48	81	62	94	80	14
KERALA	313	236	216	19	15	25	20	27	25	25	23	25	23	33	34	1
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	1755	1198	1260	170	149	144	139	159	142	129	129	160	162	170	168	41
MAHARASHTRA	2284	1697	1324	183	160	166	140	180	176	145	148	159	145	169	179	23
MANIPUR	33	27	16	3	2	1	2	0	1	2	0	3	6	3	1	0
MEGHALAYA	27	24	15	2	1	1	0	3	1	2	2	2	3	1	1	0
MIZORAM	30	25	15	2	1	3	0	1	1	3	1	0	3	3	3	0
NAGALAND	11	8	10	1	1	2	0	1	2	1	0	1	2	2	0	1
ODISHA	1225	905	633	108	107	87	68	63	68	60	77	58	65	101	105	36
PONDICHERRY	11	7	16	1	1	1	1	2	0	2	1	2	0	6	3	0
PUNJAB	696	476	313	84	41	38	47	76	48	31	22	28	23	37	31	17
RAJASTHAN	1885	1331	1078	184	154	140	131	128	130	119	124	168	135	128	125	21
SIKKIM	6	6	2	0	0	0	0	0	0	1	0	1	0	0	0	0
TAMIL NADU	549	351	550	60	45	38	64	64	67	91	57	73	53	88	51	6
TELANGANA	248	152	202	11	21	37	30	26	25	25	21	24	28	27	24	2
TRIPURA	51	36	24	6	4	2	3	2	2	4	1	4	3	1	3	4
UTTAR PRADESH	13115	9243	8102	1398	1083	1002	1039	927	810	823	785	949	1116	1071	1104	517
UTTARAKHAND	274	212	144	25	15	16	19	17	19	20	11	18	18	23	13	5
WEST BENGAL	2478	1782	1500	182	175	206	161	170	179	164	162	156	166	215	228	60
TOTAL	39128	27677	23751	3731	3135	3042	2890	2938	2687	2656	2417	2815	2938	3154	3078	1068

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

Data from weekly case based reports

Figure 1: Polio cases and SIAs



WHO Country Office for India, National Polio Surveillance Project;

email: seinddata@who.int; website: www.searo.who.int/india/topics/poliomyelitis/en/

Table 2: AFP cases key surveillance indicators,2016 - 2018

State/UT's	2016						2017						2018					
	#	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	7	0	0	7	0	0	2	0	0	2	0	0	6	0	0	6	0	0
ANDHRA PRADESH	442	0	0	442	0	0	339	0	0	339	0	0	284	0	0	228	56	16
ARUNACHAL PR.	21	0	0	21	0	0	11	0	0	11	0	0	3	0	0	2	1	1
ASSAM	371	0	0	371	0	0	308	0	3	305	0	0	187	0	0	172	15	5
BIHAR	11072	1	3	11068	0	0	8416	0	10	8406	0	0	4720	0	0	4170	550	124
CHANDIGARH	87	0	0	87	0	0	63	0	0	63	0	0	35	0	0	30	5	0
CHHATTISGARH	373	0	1	372	0	0	332	0	0	332	0	0	161	0	0	122	39	21
D&N HAVELI	6	0	0	6	0	0	7	0	0	7	0	0	3	0	0	2	1	0
DAMAN & DIU	10	0	0	10	0	0	12	0	0	12	0	0	2	0	0	2	0	0
DELHI	824	0	0	824	0	0	707	0	0	707	0	0	460	0	0	395	65	18
GOA	29	0	0	29	0	0	27	0	0	27	0	0	13	0	0	9	4	2
GUJARAT	1082	0	0	1082	0	0	993	0	1	992	0	0	706	0	0	597	109	42
HARYANA	997	0	0	997	0	0	964	0	0	964	0	0	463	0	0	416	47	21
HIMACHAL PRADESH	180	0	0	180	0	0	83	0	0	83	0	0	56	0	0	47	9	5
JAMMU & KASHMIR	196	0	0	196	0	0	301	0	0	301	0	0	145	0	0	140	5	4
JHARKHAND	1019	0	2	1017	0	0	909	0	0	909	0	0	557	0	0	460	97	50
KARNATAKA	943	0	0	943	0	0	663	0	1	662	0	0	530	0	0	446	84	35
KERALA	356	0	0	356	0	0	313	0	0	313	0	0	216	0	0	192	24	4
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	2267	0	0	2267	0	0	1755	0	1	1754	0	0	1260	0	0	1061	199	81
MAHARASHTRA	2721	0	2	2719	0	0	2284	0	1	2283	0	0	1324	0	0	1103	221	126
MANIPUR	21	0	0	21	0	0	33	0	0	33	0	0	16	0	0	16	0	0
MEGHALAYA	26	0	0	26	0	0	27	0	0	27	0	0	15	0	0	12	3	3
MIZORAM	34	0	0	34	0	0	30	0	0	30	0	0	15	0	0	12	3	1
NAGALAND	18	0	0	18	0	0	11	0	0	11	0	0	10	0	0	5	5	3
ODISHA	1620	0	0	1620	0	0	1225	0	1	1224	0	0	633	0	0	550	83	29
PONDICHERRY	17	0	0	17	0	0	11	0	0	11	0	0	16	0	0	16	0	0
PUNJAB	726	0	0	726	0	0	696	0	0	696	0	0	313	0	0	253	60	28
RAJASTHAN	1742	0	1	1741	0	0	1885	0	1	1884	0	0	1078	0	0	952	126	61
SIKKIM	4	0	0	4	0	0	6	0	0	6	0	0	2	0	0	2	0	0
TAMIL NADU	727	0	0	727	0	0	549	0	0	549	0	0	550	0	0	531	19	4
TELANGANA	404	0	0	404	0	0	248	0	0	248	0	0	202	0	0	166	36	17
TRIPURA	30	0	0	30	0	0	51	0	0	51	0	0	24	0	0	17	7	2
UTTAR PRADESH	14780	0	6	14774	0	0	13115	0	14	13101	0	0	8102	0	0	6946	1156	307
UTTARAKHAND	394	0	0	394	0	0	274	0	1	273	0	0	144	0	0	117	27	10
WEST BENGAL	2953	0	0	2953	0	0	2478	0	3	2475	0	0	1500	0	0	1326	174	56
TOTAL	46499	1	15	46483	0	0	39128	0	37	39091	0	0	23751	0	0	20521	3230	1076

Table 3: AFP cases key surveillance indicators, 2016 - 2018

State/UT's	2016				2017				2018			
	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	7.61	7.61	86	86	2.11	2.11	100	100	8.46	8.46	100	100
ANDHRA PRADESH	3.38	3.38	89	96	2.57	2.57	86	96	2.94	2.36	75	95
ARUNACHAL PR.	3.37	3.37	71	100	1.74	1.74	82	100	0.61	0.41	67	100
ASSAM	2.81	2.81	96	99	2.56	2.53	94	99	2.09	1.92	93	98
BIHAR	23.83	23.83	88	99	17.65	17.63	89	98	13.12	11.59	88	98
CHANDIGARH	19.16	19.16	95	100	13.64	13.64	89	100	10.19	8.73	89	91
CHHATTISGARH	3.40	3.39	63	94	2.99	2.99	73	96	2.01	1.52	71	96
D&N HAVELI	7.14	7.14	83	100	8.05	8.05	86	100	4.56	3.04	100	100
DAMAN & DIU	14.93	14.93	100	100	15.58	15.58	100	100	4.72	4.72	100	100
DELHI	15.08	15.08	81	97	12.72	12.72	83	97	10.8	9.27	82	97
GOA	7.04	7.04	93	100	6.46	6.46	74	96	4.2	2.90	54	100
GUJARAT	4.67	4.67	84	94	5.02	5.02	83	95	5.08	4.29	82	95
HARYANA	9.04	9.04	84	98	8.58	8.58	85	98	5.53	4.97	87	99
HIMACHAL PRADESH	7.93	7.93	87	97	4.02	4.02	84	98	3.65	3.06	84	96
JAMMU & KASHMIR	3.44	3.44	93	99	5.44	5.44	93	100	3.55	3.43	97	99
JHARKHAND	8.37	8.35	81	96	7.33	7.33	79	96	5.93	4.90	80	98
KARNATAKA	5.43	5.43	82	97	3.76	3.75	82	97	4.04	3.40	84	96
KERALA	4.15	4.15	90	100	3.63	3.63	91	100	3.41	3.03	91	99
LAKSHADWEEP	0.00	0.00	NA	NA	0	0	NA	NA	0	0.00	NA	NA
MADHYA PRADESH	7.08	7.08	83	98	5.38	5.38	81	97	5.19	4.37	82	97
MAHARASHTRA	8.27	8.26	84	97	6.85	6.85	83	98	5.37	4.47	81	97
MANIPUR	1.99	1.99	62	100	2.51	2.51	97	100	2.05	2.05	94	94
MEGHALAYA	1.95	1.95	85	96	1.85	1.85	85	100	1.36	1.09	80	100
MIZORAM	6.71	6.71	91	97	6.59	6.59	80	100	4.69	3.75	73	100
NAGALAND	2.82	2.82	67	89	1.51	1.51	73	91	2.1	1.05	50	80
ODISHA	12.82	12.82	88	99	9.38	9.37	88	99	6.63	5.76	90	98
PONDICHERRY	4.17	4.17	94	94	3.41	3.41	91	100	6.7	6.70	94	100
PUNJAB	9.51	9.51	84	98	9	9	84	97	5.46	4.42	80	95
RAJASTHAN	7.12	7.11	82	95	7.63	7.63	83	97	5.87	5.18	85	96
SIKKIM	1.77	1.77	100	100	2.62	2.62	83	100	1.18	1.18	100	100
TAMIL NADU	3.94	3.94	95	99	3.11	3.11	95	99	4.25	4.10	95	99
TELANGANA	3.97	3.97	80	94	2.36	2.36	72	96	2.68	2.20	70	99
TRIPURA	1.85	1.85	77	100	3.96	3.96	86	100	3.29	2.33	88	100
UTTAR PRADESH	16.89	16.89	88	98	14.72	14.7	86	98	12.22	10.47	85	97
UTTARAKHAND	8.91	8.91	87	98	6.09	6.06	84	98	4.3	3.49	76	94
WEST BENGAL	9.43	9.43	93	99	8.05	8.04	91	99	6.64	5.87	91	99
TOTAL	10.60	10.60	87	98	8.93	8.92	86	98	7.33	6.33	85	97

Figure 2: Timeliness of Reporting Units

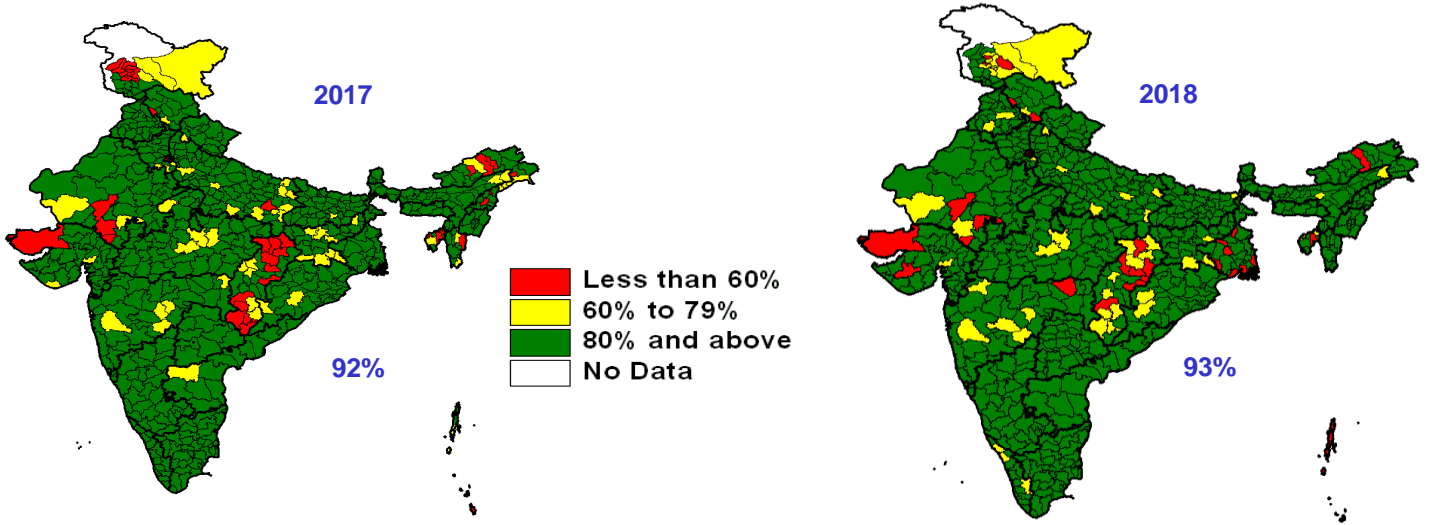


Figure 3: Non-polio AFP rate

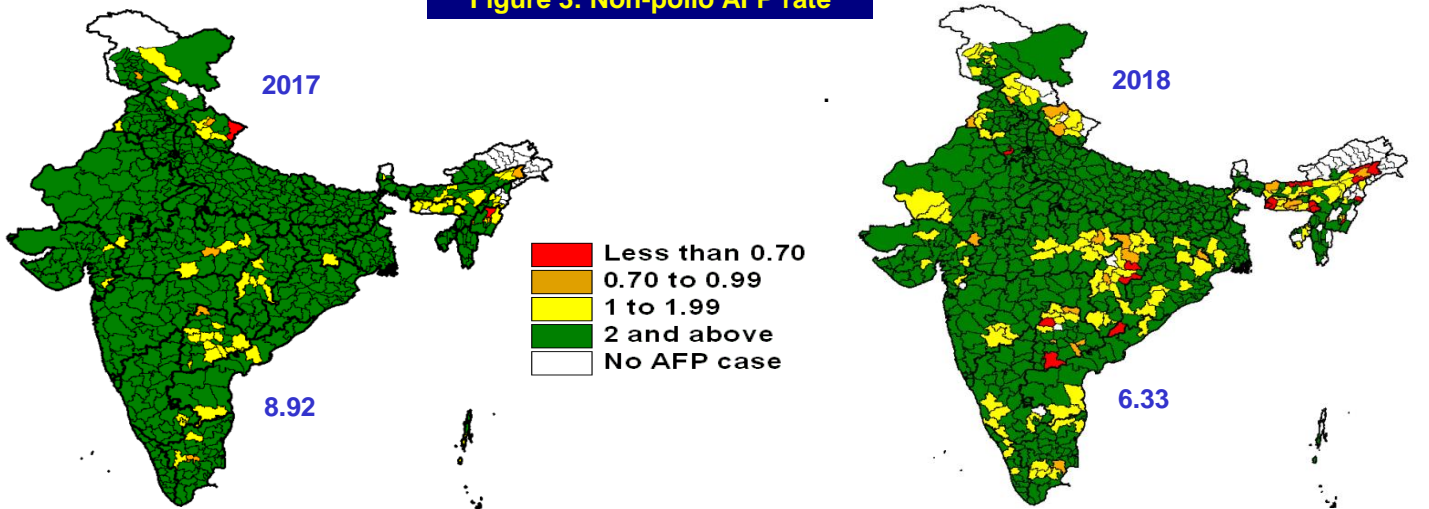


Figure 4: Stool collection within 14 days

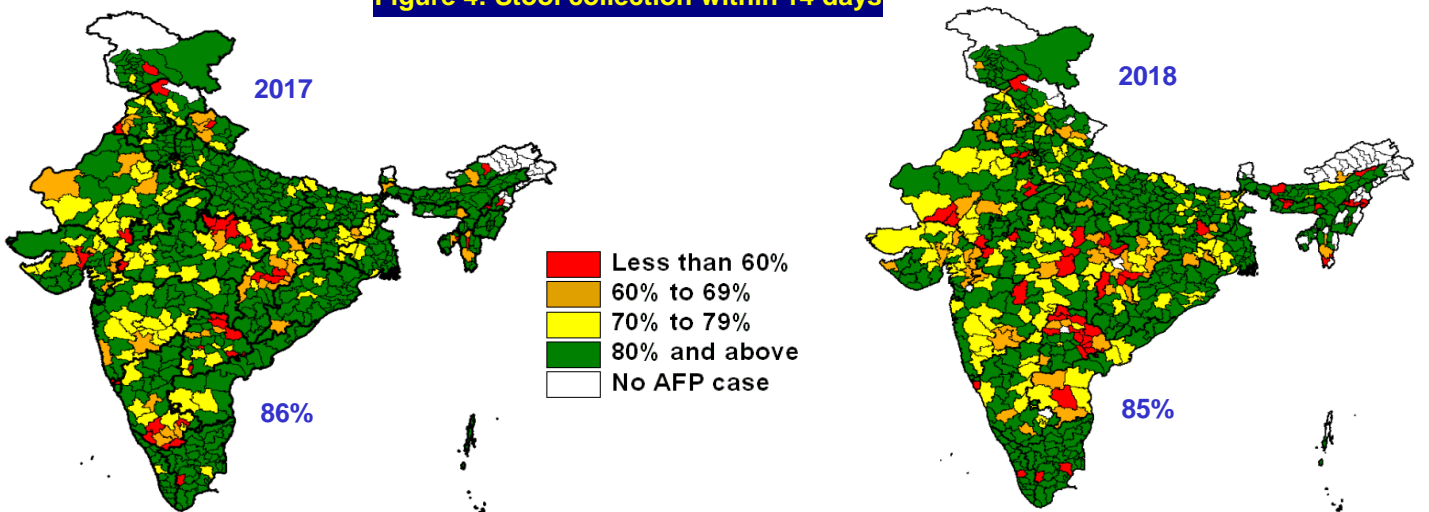
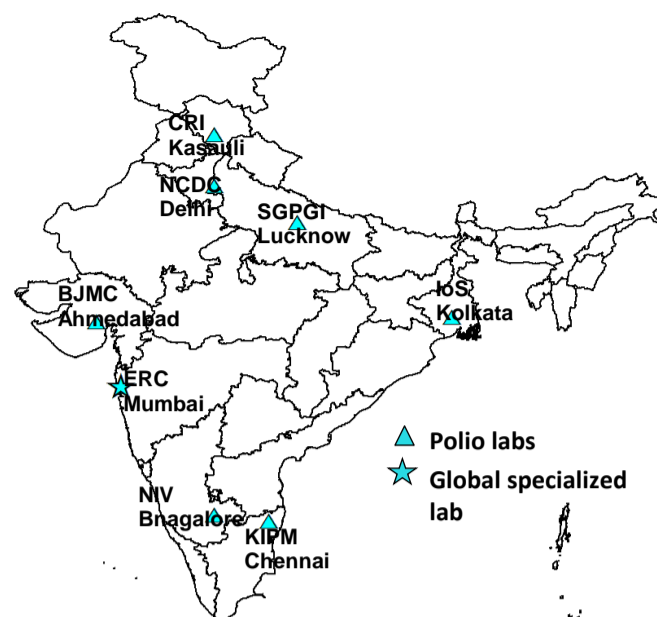


Table 4: Primary isolation results of AFP cases

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	3320	142	19	697	2327	135	0	6639
NIV, Bangalore	1950	79	10	565	1215	81	0	3900
ERC, Mumbai	2430	102	9	571	1739	9	0	4851
IoS, Kolkata	3292	117	10	588	2461	116	0	6561
NCDC, Delhi	3674	119	14	579	2829	133	0	7315
CRI, Kasauli	871	16	1	118	736	0	0	1746
KIPM, Chennai	2335	59	3	412	1853	8	0	4661
SGPGI, Lucknow	4771	129	17	921	3367	337	0	9695
TOTAL	22643	763	83	4451	16527	819	0	45368

Figure 5: Polio laboratory network



2017								
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	5428	198	30	1059	4141	0	0	10862
NIV, Bangalore	3502	120	23	950	2409	0	0	7016
ERC, Mumbai	2891	142	13	498	2238	0	0	5808
IoS, Kolkata	5872	160	19	1309	4384	0	0	11748
NCDC, Delhi	5990	178	21	823	4968	0	0	11980
CRI, Kasauli	1981	19	1	298	1663	0	0	3971
KIPM, Chennai	3641	43	7	671	2920	0	0	7257
SGPGI, Lucknow	8954	249	34	2060	6611	0	0	17913
TOTAL	38259	1109	148	7668	29334	0	0	76555

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

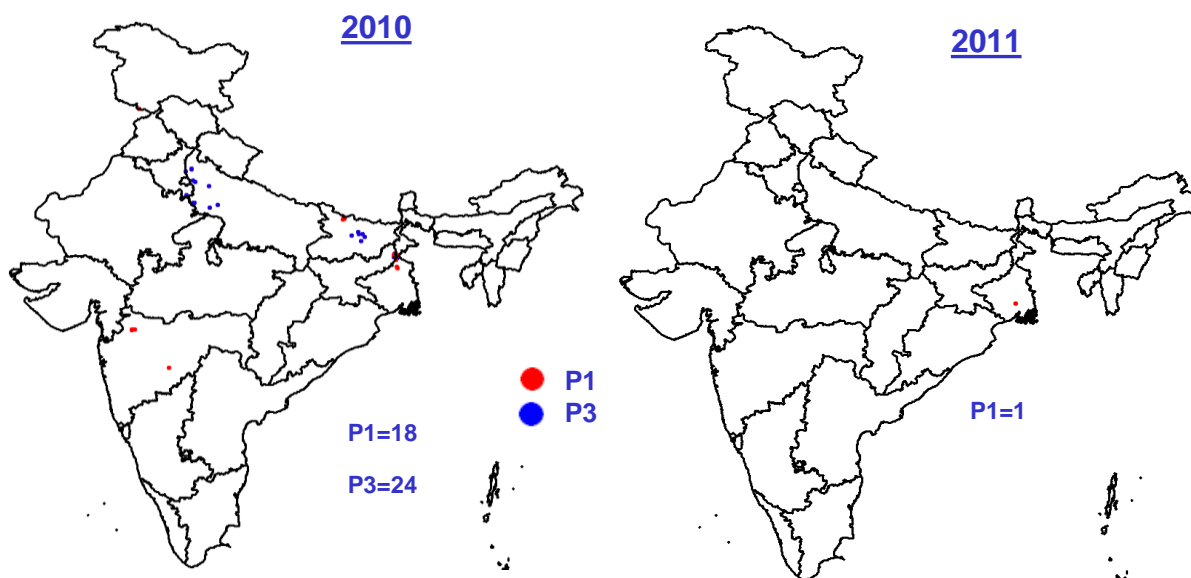
2018																		
Polio Laboratories	Number of AFP cases referred for ITD	Number of AFP cases with ITD result as														Number of cases pending for		
		Wild poliovirus				Vaccine poliovirus				VDPV			NPEV by PCR	Non enterovirus	Negative	<=7 days	8-14 days	>14 days
		Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3						
BJMC, Ahmedabad	162	0	0	0	0	37	0	52	68	0	0	0	5	0	0	0	0	0
NIV, Bangalore	89	0	0	0	0	23	0	29	33	0	0	0	4	0	0	0	0	0
ERC, Mumbai	111	0	0	0	0	24	0	37	31	0	0	0	17	0	0	2	0	0
IoS, Kolkata	127	0	0	0	0	33	0	38	47	0	0	0	8	1	0	0	0	0
NCDC, Delhi	132	0	0	0	0	41	0	49	40	0	0	0	0	0	0	2	0	0
CRI, Kasauli	17	0	0	0	0	5	0	3	9	0	0	0	0	0	0	0	0	0
KIPM, Chennai	61	0	0	0	0	16	0	21	24	0	0	0	0	0	0	0	0	0
SGPGI, Lucknow	147	0	0	0	0	41	1	56	47	0	0	0	1	0	1	0	0	0
TOTAL	846	0	0	0	0	220	1	285	299	0	0	0	35	1	1	4	0	0

2017																		
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	228	0	0	0	0	79	0	62	78	0	0	0	9	0	0	0	0	0
NIV, Bangalore	144	0	0	0	0	52	0	32	45	0	0	0	15	0	0	0	0	0
ERC, Mumbai	159	0	0	0	0	51	0	48	39	0	0	0	21	0	0	0	0	0
IoS, Kolkata	172	0	0	0	0	53	0	41	56	0	0	0	19	3	0	0	0	0
NCDC, Delhi	199	0	0	0	0	55	0	88	48	0	0	0	8	0	0	0	0	0
CRI, Kasauli	21	0	0	0	0	11	0	5	5	0	0	0	0	0	0	0	0	0
KIPM, Chennai	49	0	0	0	0	10	0	25	14	0	0	0	0	0	0	0	0	0
SGPGI, Lucknow	285	0	0	0	0	58	0	98	63	0	0	0	25	41	0	0	0	0
TOTAL	1257	0	0	0	0	369	0	399	348	0	0	0	97	44	0	0	0	0

Table 6: Most recent Wild Polio Virus case by State

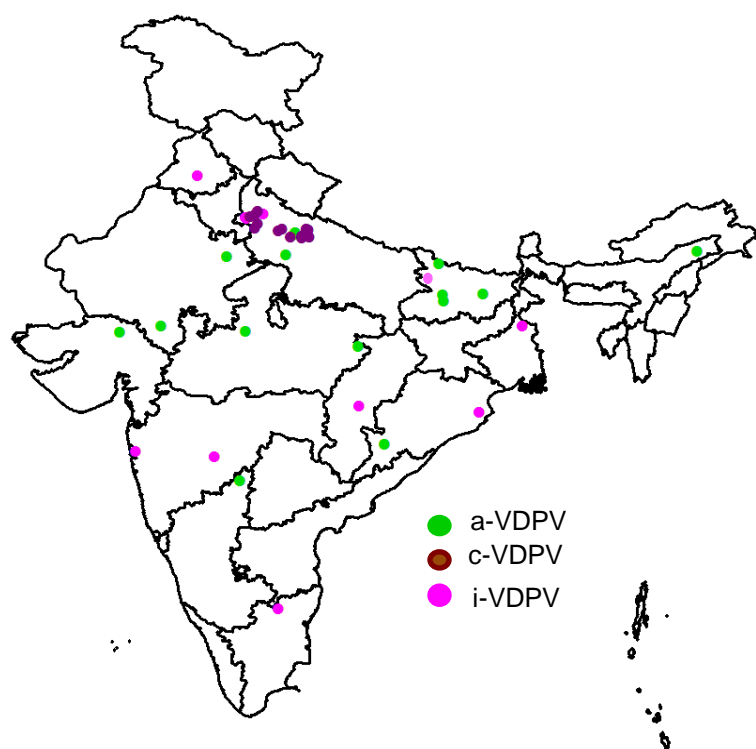
State	Date of most recent polio case	Type
West Bengal	13-Jan-11	P1
Jharkhand	22-Oct-10	P3
Maharashtra	16-Sep-10	P1
Bihar	01-Sep-10	P1
Uttar Pradesh	21-Apr-10	P3
Jammu & Kashmir	07-Feb-10	P1
Haryana	13-Jan-10	P3
Rajasthan	27-Nov-09	P3
Uttarakhand	06-Nov-09	P3
Himachal Pradesh	17-Oct-09	P3
Punjab	13-Oct-09	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
January	112	36	36	7	18	51	4	10	8	24	112	14	16	1	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
March	42	11	10	3	7	9	1	1	8	14	40	16	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
May	49	39	6	4	42	5	9	2	36	32	34	24	2	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
July	324	142	25	30	251	25	13	3	121	64	53	89	5	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
September	283	193	32	33	334	30	18	14	137	82	49	145	3	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
November	226	155	31	43	180	16	14	7	55	203	24	60	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
Total	1934	1126	265	268	1600	225	134	66	676	874	559	741	42	1	0	0	0	0	0	0	0

Figure 7: Vaccine-derived Poliovirus in AFP cases, India, 2009 - 2018



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						
Total	1	1	15	18	9	1

