

AFP Surveillance Bulletin - India

Report for week 14, ending 7 April 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 14, 2017	AFP cases as on week 14, 2018	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18
A&N ISLANDS	2	2	4	0	0	0	0	0	0	0	0	0	1	1	2	0
ANDHRA PRADESH	341	74	95	26	29	19	31	22	33	43	32	26	44	26	25	0
ARUNACHAL PR.	11	3	1	0	1	2	1	1	0	1	1	0	0	0	1	0
ASSAM	308	55	61	26	26	26	41	40	24	25	21	24	19	22	20	0
BIHAR	8461	1900	1609	560	608	652	903	925	776	691	712	648	617	547	445	0
CHANDIGARH	63	6	14	5	7	3	7	10	7	5	4	4	4	4	6	0
CHHATTISGARH	336	81	58	24	36	26	26	39	31	28	19	17	28	21	9	0
D&N HAVELI	7	2	1	0	0	0	0	1	2	0	2	0	0	0	1	0
DAMAN & DIU	12	2	2	0	2	0	2	1	1	2	2	0	2	0	0	0
DELHI	712	159	140	49	64	60	77	78	42	52	52	59	71	36	33	0
GOA	27	4	2	3	4	2	4	4	2	1	2	0	1	1	0	0
GUJARAT	998	205	265	64	84	82	101	146	111	61	76	54	97	91	77	0
HARYANA	964	177	156	60	91	54	85	124	101	80	75	74	61	77	18	0
HIMACHAL PRADESH	83	13	28	5	7	8	9	16	9	8	4	4	9	14	5	0
JAMMU & KASHMIR	301	43	45	23	17	23	29	39	32	28	33	19	17	16	12	0
JHARKHAND	916	166	183	62	78	92	97	106	72	84	74	63	59	64	60	0
KARNATAKA	664	105	131	48	54	55	77	81	60	60	40	44	48	47	36	0
KERALA	313	84	63	31	27	15	33	32	19	15	25	20	28	26	9	0
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	1763	345	378	129	161	149	139	212	171	151	145	141	154	140	84	0
MAHARASHTRA	2289	540	386	174	164	208	256	249	184	162	162	143	170	153	63	0
MANIPUR	33	1	2	1	1	3	13	6	3	2	1	2	0	1	1	0
MEGHALAYA	27	1	4	2	2	6	6	5	2	1	1	0	3	0	1	0
MIZORAM	30	4	3	2	3	2	4	8	2	1	3	0	1	1	1	0
NAGALAND	11	3	3	1	0	1	1	0	1	1	2	0	2	1	0	0
ODISHA	1230	200	180	85	72	99	180	206	111	107	87	69	63	66	51	0
PONDICHERRY	11	2	4	2	1	0	1	1	1	1	1	1	2	0	2	0
PUNJAB	700	153	141	40	50	30	56	142	85	42	39	47	77	44	20	0
RAJASTHAN	1891	315	295	138	171	143	167	224	185	155	140	132	128	123	44	0
SIKKIM	6	3	1	0	2	1	0	0	0	0	0	0	0	0	1	0
TAMIL NADU	549	101	156	26	42	44	59	43	60	45	38	64	64	63	29	0
TELANGANA	249	62	70	24	10	18	19	15	12	21	38	29	27	24	19	0
TRIPURA	51	8	8	1	7	7	6	7	6	4	2	3	2	2	4	0
UTTAR PRADESH	13218	2732	2302	902	987	1056	1189	1654	1403	1108	1030	1053	914	788	600	0
UTTARAKHAND	277	77	48	18	29	18	15	37	26	16	17	20	17	19	12	0
WEST BENGAL	2485	465	459	213	212	232	327	272	182	175	207	163	168	178	113	0
TOTAL	39339	8093	7298	2744	3049	3136	3961	4746	3756	3176	3087	2923	2898	2596	1804	0

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

Data from weekly case based reports

Figure 1: Polio cases and SIAs

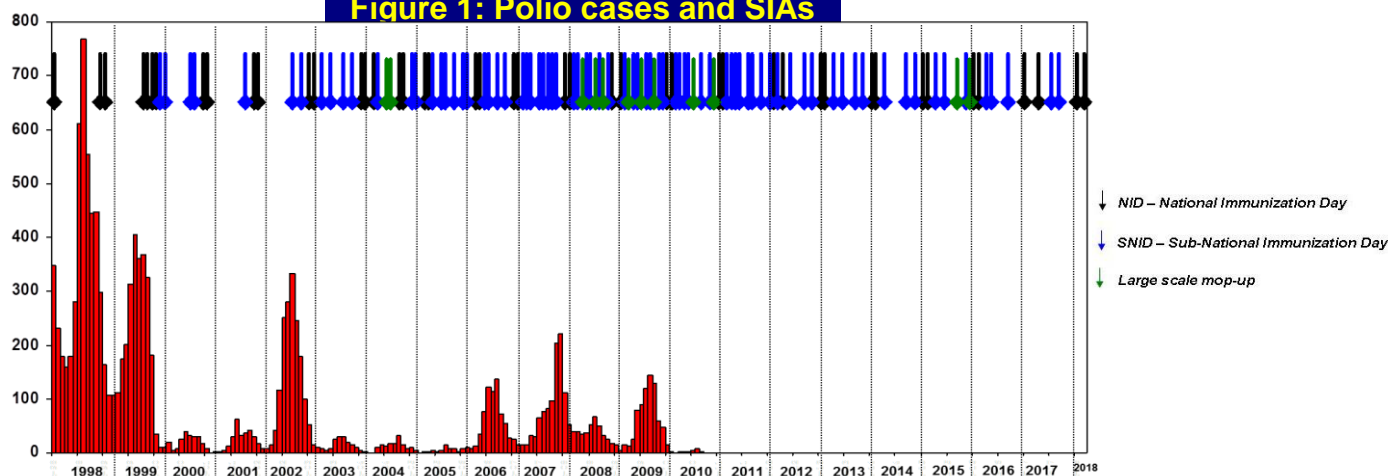


Table 2: AFP cases key surveillance indicators, 2016 - 2018

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	4	0	0	2	2	0
ANDHRA PRADESH	442	0	0	442	0	0	341	0	0	331	10	10	95	0	0	68	27	2
ARUNACHAL PR.	21	0	0	21	0	0	11	0	0	9	2	2	1	0	0	0	1	0
ASSAM	371	0	0	371	0	0	308	0	2	302	4	4	61	0	0	31	30	0
BIHAR	11072	1	3	11068	0	0	8461	0	5	8300	156	156	1609	0	0	1216	393	10
CHANDIGARH	87	0	0	87	0	0	63	0	0	63	0	0	14	0	0	13	1	0
CHHATTISGARH	373	0	1	372	0	0	336	0	0	325	11	11	58	0	0	31	27	1
D&N HAVELI	6	0	0	6	0	0	7	0	0	7	0	0	1	0	0	0	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	712	0	0	661	51	51	140	0	0	121	19	1
GOA	29	0	0	29	0	0	27	0	0	23	4	4	2	0	0	2	0	0
GUJARAT	1082	0	0	1082	0	0	998	0	0	965	33	33	265	0	0	206	59	4
HARYANA	997	0	0	997	0	0	964	0	0	939	25	25	156	0	0	136	20	1
HIMACHAL PRADESH	180	0	0	180	0	0	83	0	0	75	8	8	28	0	0	24	4	0
JAMMU & KASHMIR	196	0	0	196	0	0	301	0	0	296	5	5	45	0	0	44	1	0
JHARKHAND	1019	0	2	1017	0	0	916	0	0	884	32	32	183	0	0	115	68	3
KARNATAKA	943	0	0	943	0	0	664	0	0	632	32	32	131	0	0	104	27	0
KERALA	356	0	0	356	0	0	313	0	0	308	5	5	63	0	0	55	8	0
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	1763	0	1	1691	71	71	378	0	0	294	84	6
MAHARASHTRA	2721	0	2	2719	0	0	2289	0	1	2186	102	102	386	0	0	310	76	6
MANIPUR	21	0	0	21	0	0	33	0	0	33	0	0	2	0	0	1	1	0
MEGHALAYA	26	0	0	26	0	0	27	0	0	27	0	0	4	0	0	4	0	0
MIZORAM	34	0	0	34	0	0	30	0	0	29	1	1	3	0	0	2	1	0
NAGALAND	18	0	0	18	0	0	11	0	0	9	2	2	3	0	0	2	1	0
ODISHA	1620	0	0	1620	0	0	1230	0	1	1203	26	26	180	0	0	124	56	0
PONDICHERRY	17	0	0	17	0	0	11	0	0	11	0	0	4	0	0	4	0	0
PUNJAB	726	0	0	726	0	0	700	0	0	673	27	27	141	0	0	118	23	2
RAJASTHAN	1742	0	1	1741	0	0	1891	0	0	1821	70	70	295	0	0	252	43	7
SIKKIM	4	0	0	4	0	0	6	0	0	6	0	0	1	0	0	1	0	0
TAMIL NADU	727	0	0	727	0	0	549	0	0	540	9	9	156	0	0	141	15	1
TELANGANA	404	0	0	404	0	0	249	0	0	227	22	22	70	0	0	38	32	1
TRIPURA	30	0	0	30	0	0	51	0	0	49	2	2	8	0	0	3	5	0
UTTAR PRADESH	14780	0	6	14774	0	0	13218	0	7	12922	289	289	2302	0	0	1839	463	19
UTTARAKHAND	394	0	0	394	0	0	277	0	0	258	19	19	48	0	0	33	15	0
WEST BENGAL	2953	0	0	2953	0	0	2485	0	1	2415	69	69	459	0	0	326	133	4
TOTAL	46499	1	15	46483	0	0	39339	0	18	38234	1087	1087	7298	0	0	5662	1636	68

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	15.64	7.82	100	100
ANDHRA PRADESH	3.38	3.38	89	96	2.59	2.51	86	96	2.68	1.92	81	94
ARUNACHAL PR.	3.37	3.37	71	100	1.74	1.42	82	100	0.59	0.00	100	100
ASSAM	2.81	2.81	96	99	2.56	2.51	94	99	1.88	0.96	87	95
BIHAR	23.83	23.83	88	99	17.75	17.41	88	98	12.54	9.47	88	98
CHANDIGARH	19.16	19.16	95	100	13.64	13.64	89	100	11.26	10.45	100	100
CHHATTISGARH	3.40	3.39	63	94	3.03	2.93	72	96	1.94	1.04	74	95
D&N HAVELI	7.14	7.14	83	100	8.05	8.05	86	100	4.27	0.00	100	100
DAMAN & DIU	14.93	14.93	100	100	15.58	15.58	100	100	9.65	9.65	100	100
DELHI	15.08	15.08	81	97	12.81	11.89	82	97	9.35	8.08	88	96
GOA	7.04	7.04	93	100	6.46	5.5	74	96	1.78	1.78	100	100
GUJARAT	4.67	4.67	84	94	5.05	4.88	82	95	4.98	3.87	86	98
HARYANA	9.04	9.04	84	98	8.58	8.35	85	98	5.16	4.49	88	99
HIMACHAL PRADESH	7.93	7.93	87	97	4.02	3.63	84	98	5.04	4.32	86	93
JAMMU & KASHMIR	3.44	3.44	93	99	5.44	5.35	93	100	3.02	2.96	100	100
JHARKHAND	8.37	8.35	81	96	7.39	7.13	78	96	5.48	3.45	81	98
KARNATAKA	5.43	5.43	82	97	3.76	3.58	82	97	2.76	2.19	86	98
KERALA	4.15	4.15	90	100	3.63	3.57	91	100	2.71	2.37	95	98
LAKSHADWEEP	0.00	0.00	NA	NA	0	0	NA	NA	0	0.00	NA	NA
MADHYA PRADESH	7.08	7.08	83	98	5.41	5.19	81	97	4.31	3.35	84	97
MAHARASHTRA	8.27	8.26	84	97	6.87	6.56	82	98	4.3	3.45	82	96
MANIPUR	1.99	1.99	62	100	2.51	2.51	97	100	0.57	0.28	100	100
MEGHALAYA	1.95	1.95	85	96	1.85	1.85	85	100	1.02	1.02	100	100
MIZORAM	6.71	6.71	91	97	6.59	6.37	80	100	2.45	1.63	67	100
NAGALAND	2.82	2.82	67	89	1.51	1.23	73	91	1.53	1.02	67	100
ODISHA	12.82	12.82	88	99	9.42	9.21	87	99	5.12	3.53	89	99
PONDICHERRY	4.17	4.17	94	94	3.41	3.41	91	100	4.6	4.60	75	100
PUNJAB	9.51	9.51	84	98	9.05	8.7	83	97	6.77	5.66	85	96
RAJASTHAN	7.12	7.11	82	95	7.66	7.37	83	97	4.44	3.79	88	98
SIKKIM	1.77	1.77	100	100	2.62	2.62	83	100	1.62	1.62	100	100
TAMIL NADU	3.94	3.94	95	99	3.11	3.06	95	99	3.28	2.97	97	100
TELANGANA	3.97	3.97	80	94	2.37	2.16	72	95	2.47	1.34	67	99
TRIPURA	1.85	1.85	77	100	3.96	3.81	84	100	2.31	0.87	88	100
UTTAR PRADESH	16.89	16.89	88	98	14.83	14.5	86	98	9.6	7.67	87	99
UTTARAKHAND	8.91	8.91	87	98	6.15	5.73	83	98	3.96	2.72	79	96
WEST BENGAL	9.43	9.43	93	99	8.07	7.84	91	99	5.54	3.93	92	99
TOTAL	10.60	10.60	87	98	8.97	8.72	86	98	6.18	4.80	87	98

Figure 2: Timeliness of Reporting Units

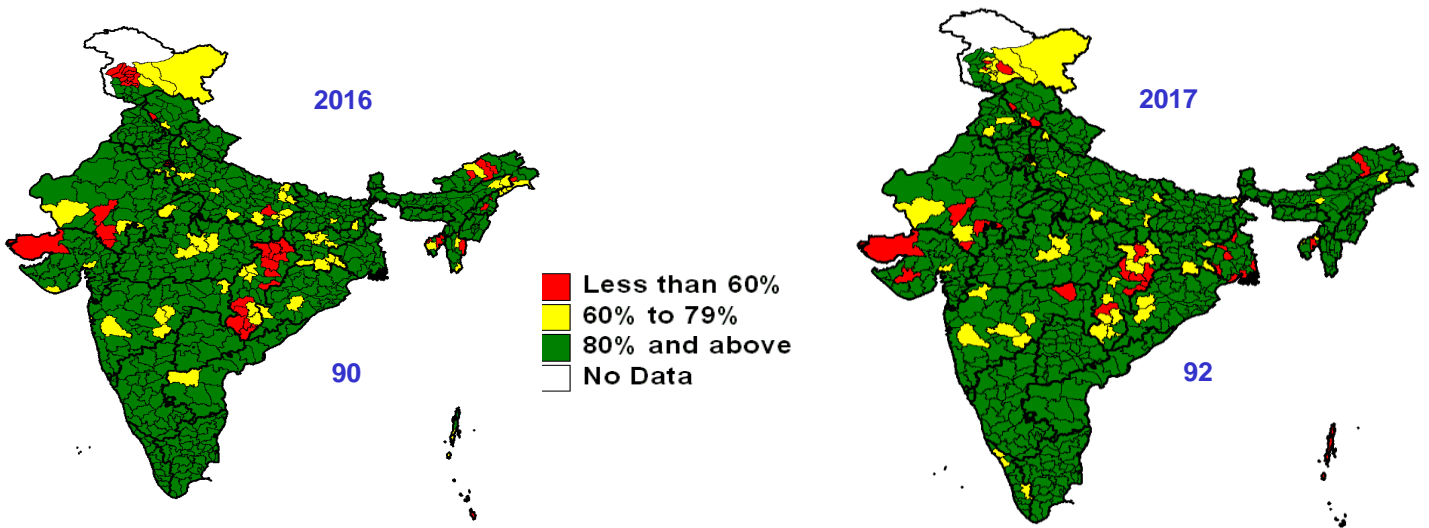


Figure 3: Non-polio AFP rate

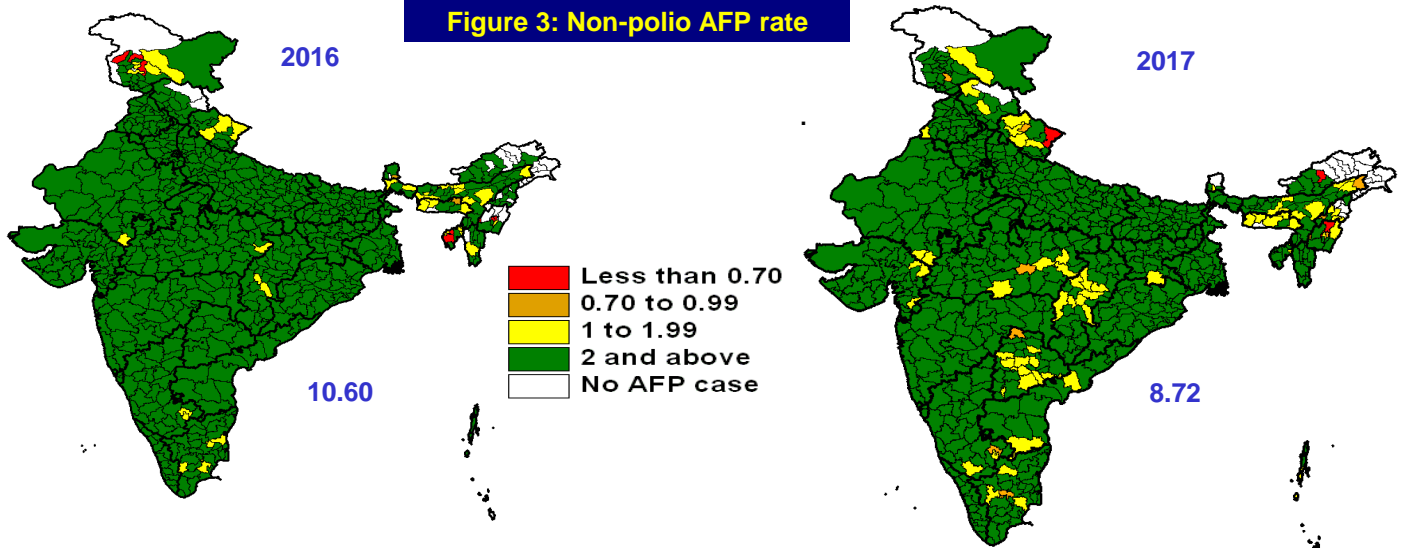


Figure 4: Stool collection within 14 days

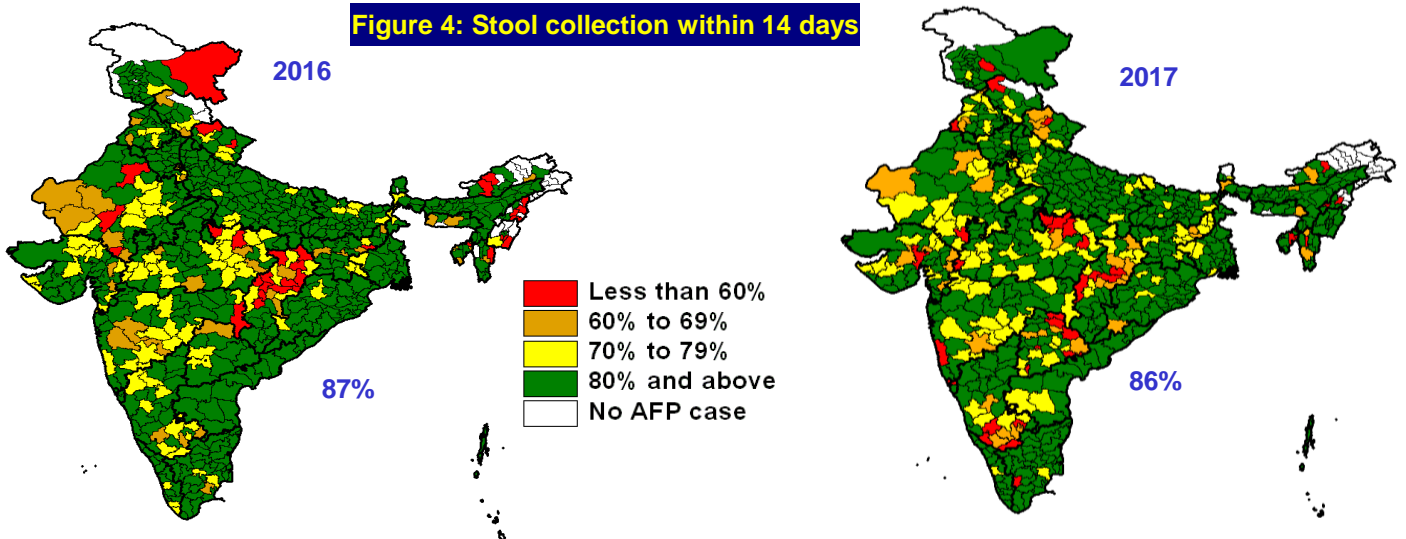
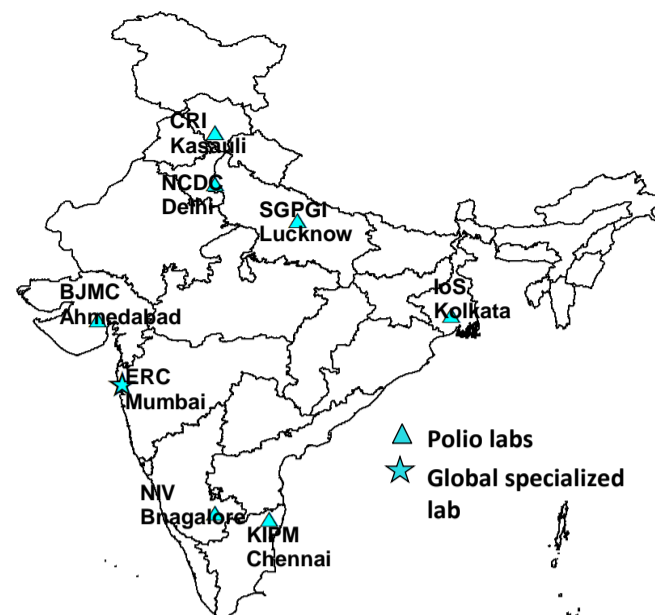


Table 4: Primary isolation results of AFP cases

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	1085	92	5	77	807	104	0	2165
NIV, Bangalore	634	53	4	75	433	68	1	1273
ERC, Mumbai	706	57	2	55	592	0	0	1400
IoS, Kolkata	901	65	0	97	645	94	0	1782
NCDC, Delhi	1106	78	7	58	897	66	0	2202
CRI, Kasauli	364	12	0	24	325	3	0	729
KIPM, Chennai	693	42	2	62	579	8	0	1357
SGPGI, Lucknow	1310	92	8	142	939	129	0	2623
TOTAL	6799	491	28	590	5217	472	1	13531

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	5449	201	30	1060	4158	0	0	10909
NIV, Bangalore	3509	126	24	951	2408	0	0	7032
ERC, Mumbai	2900	142	13	503	2242	0	0	5830
IoS, Kolkata	5876	163	19	1313	4381	0	0	11755
NCDC, Delhi	6052	181	21	834	5016	0	0	12111
CRI, Kasauli	1984	20	1	298	1665	0	0	3983
KIPM, Chennai	3647	44	7	673	2923	0	0	7269
SGPGI, Lucknow	8970	252	34	2064	6620	0	0	17939
TOTAL	38387	1129	149	7696	29413	0	0	76828

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

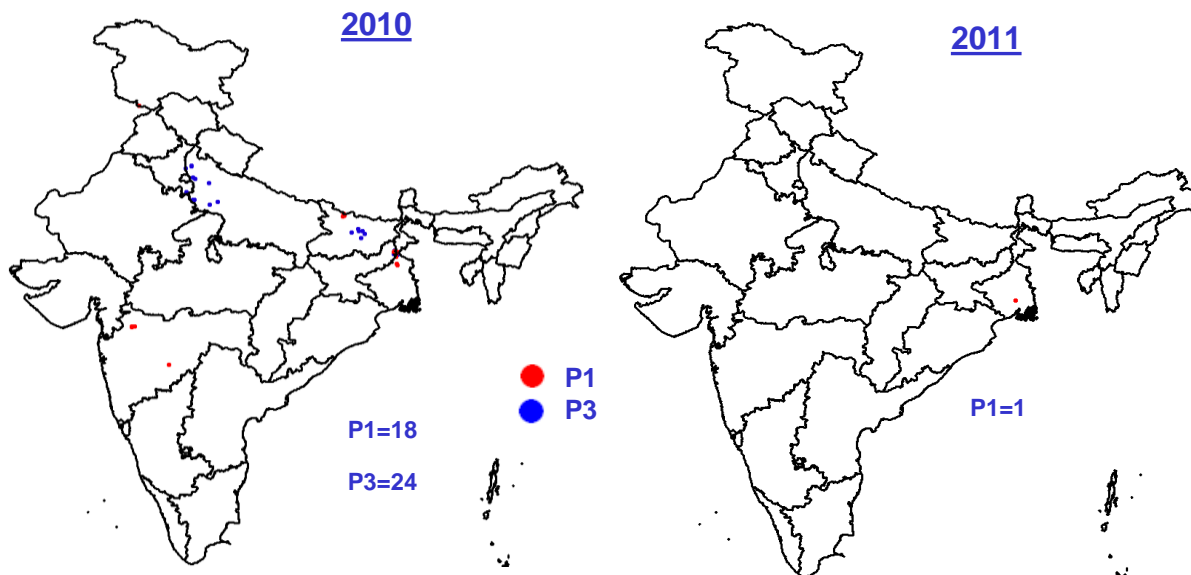
2018																		
Polio Laboratories	Number of AFP cases referred for ITD	Number of AFP cases with ITD result as														Number of cases pending for		
		Wild poliovirus				Vaccine poliovirus				VDPV			NPEV by PCR	Non enterovirus	Negative	<=7 days	8-14 days	>14 days
		Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3						
BJMC, Ahmedabad	98	0	0	0	0	23	0	22	52	0	0	0	1	0	0	0	0	0
NIV, Bangalore	57	0	0	0	0	10	0	18	25	0	0	0	1	0	0	2	1	0
ERC, Mumbai	59	0	0	0	0	14	0	24	21	0	0	0	0	0	0	0	0	0
IoS, Kolkata	65	0	0	0	0	21	0	14	27	0	0	0	0	1	0	2	0	0
NCDC, Delhi	84	0	0	0	0	29	0	26	26	0	0	0	0	0	0	3	0	0
CRI, Kasauli	12	0	0	0	0	3	0	3	5	0	0	0	0	0	0	1	0	0
KIPM, Chennai	43	0	0	0	0	9	0	16	18	0	0	0	0	0	0	0	0	0
SGPGI, Lucknow	101	0	0	0	0	29	0	32	33	0	0	0	1	0	0	6	0	0
TOTAL	519	0	0	0	0	138	0	155	207	0	0	0	3	1	0	14	1	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	231	0	0	0	0	78	0	65	79	0	0	0	9	0	0	0	0	0
NIV, Bangalore	151	0	0	0	0	58	0	33	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	175	0	0	0	0	55	0	41	57	0	0	0	19	3	0	0	0	0
NCDC, Delhi	202	0	0	0	0	56	0	88	50	0	0	0	8	0	0	0	0	0
CRI, Kasauli	22	0	0	0	0	11	0	6	5	0	0	0	0	0	0	0	0	0
KIPM, Chennai	50	0	0	0	0	10	0	26	14	0	0	0	0	0	0	0	0	0
SGPGI, Lucknow	288	0	0	0	0	59	0	99	64	0	0	0	25	41	0	0	0	0
TOTAL	1278	0	0	0	0	378	0	406	353	0	0	0	97	44	0	0	0	0

Table 6: Most recent Wild Polio Virus case by State

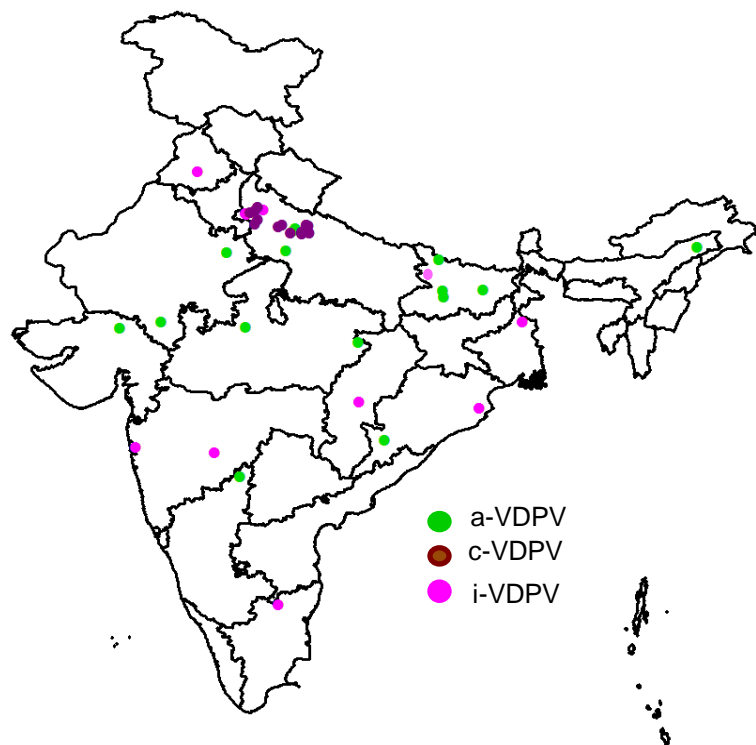
State	Date of most recent polio case	Type
West Bengal	13-Jan-11	P1
Jharkhand	22-Oct-10	P3
Maharashtra	16-Sep-10	P1
Bihar	01-Sep-10	P1
Uttar Pradesh	21-Apr-10	P3
Jammu & Kashmir	07-Feb-10	P1
Haryana	13-Jan-10	P3
Rajasthan	27-Nov-09	P3
Uttarakhand	06-Nov-09	P3
Himachal Pradesh	17-Oct-09	P3
Punjab	13-Oct-09	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 - 2017



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						
Total	1	1	15	18	9	1

