

# AFP Surveillance Bulletin - India

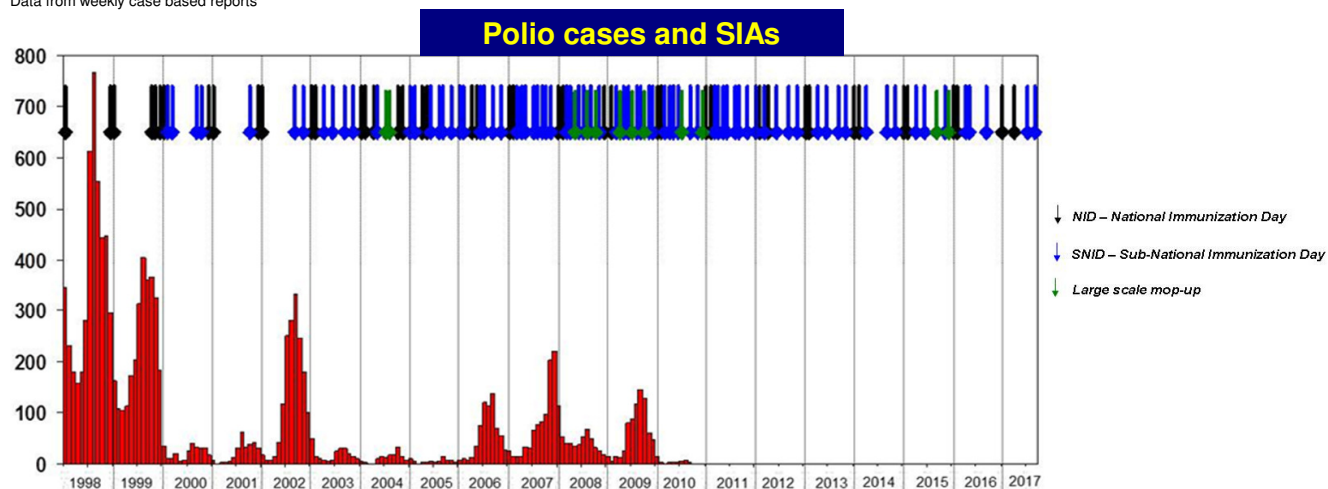
Report for week 44, ending 4 November 2017

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

State/UT's	Total AFP cases in 2016	AFP cases as on week 44, 2016	AFP cases as on week 44, 2017	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17
A&N ISLANDS	7	5	2	1	0	1	0	1	0	0	0	0	0	0	0	0
ANDHRA PRADESH	442	370	262	35	31	22	29	29	26	29	20	31	21	31	24	0
ARUNACHAL PR.	21	20	10	0	1	1	1	2	0	1	2	1	1	0	1	0
ASSAM	371	324	254	26	11	14	20	21	26	26	26	41	40	25	15	0
BIHAR	11072	9465	6872	750	788	736	650	604	563	612	655	909	925	772	446	0
CHANDIGARH	87	77	54	4	5	1	3	7	5	7	3	7	10	7	4	0
CHHATTISGARH	373	311	284	25	22	30	37	23	24	36	27	26	39	29	13	0
D&N HAVELI	6	5	5	0	0	0	1	1	0	0	0	0	1	2	0	0
DAMAN & DIU	10	7	9	4	0	1	1	0	0	2	0	2	1	1	1	0
DELHI	824	655	577	56	67	53	60	67	49	64	60	73	76	41	34	0
GOA	29	26	21	0	1	2	1	2	3	3	2	4	3	1	0	0
GUJARAT	1082	890	837	88	84	82	63	74	64	85	82	101	146	108	32	0
HARYANA	997	837	769	63	60	73	74	73	61	91	54	86	122	97	38	0
HIMACHAL PRADESH	180	162	70	10	6	5	4	4	5	7	8	9	16	8	4	0
JAMMU & KASHMIR	196	136	219	16	33	14	18	26	23	17	23	28	39	29	2	0
JHARKHAND	1019	823	743	68	77	59	65	65	63	79	92	99	104	68	49	0
KARNATAKA	943	805	548	66	40	51	45	49	48	54	55	78	81	58	29	0
KERALA	356	253	260	39	32	36	29	31	31	27	15	33	32	19	7	0
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	2267	1820	1407	188	153	140	116	112	129	162	152	137	213	161	85	0
MAHARASHTRA	2721	2251	1875	207	162	212	188	192	177	166	212	254	248	165	61	0
MANIPUR	21	20	28	2	1	1	0	0	1	1	3	13	6	3	0	0
MEGHALAYA	26	21	26	3	1	1	1	0	2	2	6	6	5	2	1	0
MIZORAM	34	26	26	1	2	1	4	0	2	3	2	4	8	1	1	0
NAGALAND	18	15	8	1	1	2	1	1	1	0	1	1	0	1	0	0
ODISHA	1620	1402	1016	78	118	71	72	71	85	72	103	183	205	110	44	0
PONDICHERRY	17	9	8	5	1	1	1	0	2	1	0	1	1	1	0	0
PUNJAB	726	635	589	39	35	55	61	53	42	50	31	57	137	80	23	0
RAJASTHAN	1742	1415	1546	132	126	142	146	150	141	171	142	170	220	176	88	0
SIKKIM	4	4	6	0	0	1	1	1	0	2	1	0	0	0	0	0
TAMIL NADU	727	594	420	57	47	59	38	31	26	42	44	59	42	60	19	0
TELANGANA	404	357	175	17	23	17	21	25	25	10	18	19	14	10	16	0
TRIPURA	30	26	44	0	2	2	3	3	1	7	7	6	7	6	2	0
UTTAR PRADESH	14780	12410	10782	1132	1082	1076	825	938	907	1008	1073	1216	1666	1391	682	0
UTTARAKHAND	394	336	232	31	20	30	27	24	19	28	18	15	38	25	8	0
WEST BENGAL	2953	2470	2026	220	198	163	146	193	213	213	232	331	275	176	84	0
<b>TOTAL</b>	<b>46499</b>	<b>38982</b>	<b>32010</b>	<b>3364</b>	<b>3230</b>	<b>3155</b>	<b>2752</b>	<b>2873</b>	<b>2764</b>	<b>3078</b>	<b>3169</b>	<b>4000</b>	<b>4742</b>	<b>3664</b>	<b>1813</b>	<b>0</b>

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

Data from weekly case based reports

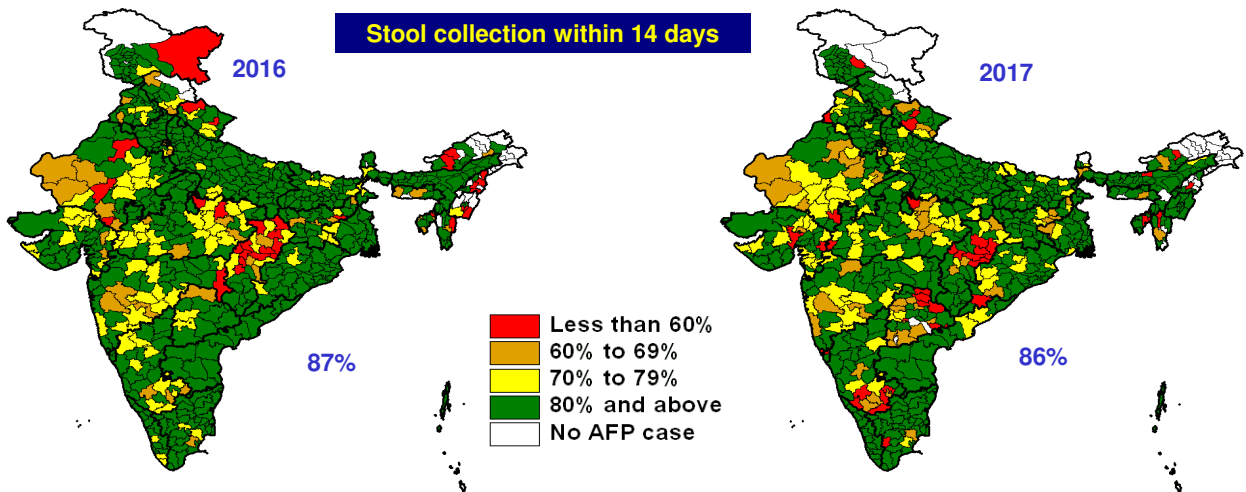
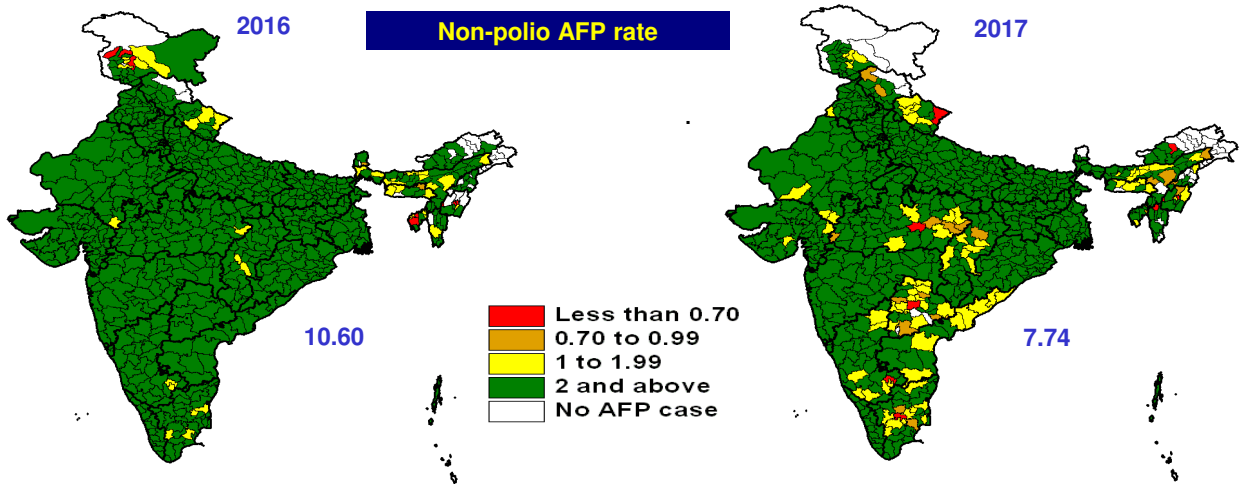
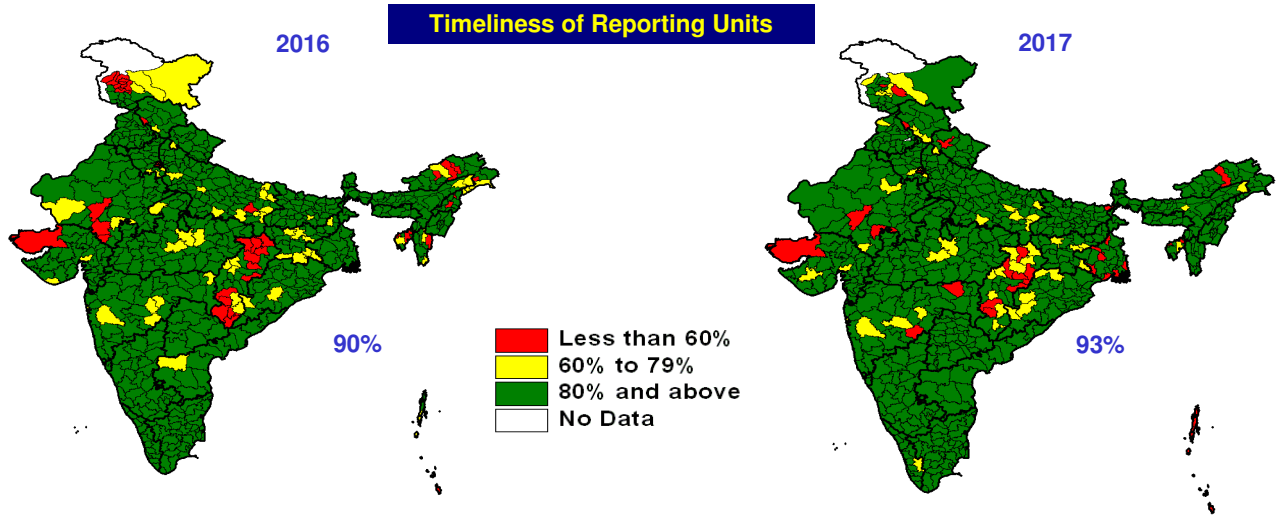


**AFP cases key surveillance indicators,2015 - 2017**

State/UT's	2015						2016						2017					
	#	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	7	0	0	7	0	0	2	0	0	2	0	0
ANDHRA PRADESH	500	0	0	500	0	0	442	0	0	442	0	0	262	0	0	221	41	9
ARUNACHAL PR.	20	0	0	20	0	0	21	0	0	21	0	0	10	0	0	7	3	2
ASSAM	322	0	0	322	0	0	371	0	0	371	0	0	254	0	0	232	22	4
BIHAR	12595	0	1	12594	0	0	11072	1	3	11068	0	0	6872	0	3	6214	655	150
CHANDIGARH	81	0	0	81	0	0	87	0	0	87	0	0	54	0	0	51	3	1
CHHATTISGARH	347	0	0	347	0	0	373	0	1	372	0	0	284	0	0	252	32	10
D&N HAVELI	7	0	0	7	0	0	6	0	0	6	0	0	5	0	0	5	0	0
DAMAN & DIU	13	0	0	13	0	0	10	0	0	10	0	0	9	0	0	8	1	0
DELHI	860	1	0	859	0	0	824	0	0	824	0	0	577	0	0	510	67	29
GOA	27	0	0	27	0	0	29	0	0	29	0	0	21	0	0	17	4	4
GUJARAT	893	0	0	893	0	0	1082	0	0	1082	0	0	837	0	0	749	88	24
HARYANA	1017	0	0	1017	0	0	997	0	0	997	0	0	769	0	0	701	68	31
HIMACHAL PRADESH	124	0	0	124	0	0	180	0	0	180	0	0	70	0	0	60	10	5
JAMMU & KASHMIR	152	0	0	152	0	0	196	0	0	196	0	0	219	0	0	212	7	2
JHARKHAND	1169	0	2	1167	0	0	1019	0	2	1017	0	0	743	0	0	654	89	34
KARNATAKA	949	0	1	948	0	0	943	0	0	943	0	0	548	0	0	470	78	36
KERALA	355	0	0	355	0	0	356	0	0	356	0	0	260	0	0	243	17	4
LAKSHADWEEP	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	2285	1	0	2284	0	0	2267	0	0	2267	0	0	1407	0	1	1205	201	68
MAHARASHTRA	2463	0	0	2463	0	0	2721	0	2	2719	0	0	1875	0	1	1604	270	140
MANIPUR	31	0	0	31	0	0	21	0	0	21	0	0	28	0	0	27	1	1
MEGHALAYA	27	0	0	27	0	0	26	0	0	26	0	0	26	0	0	24	2	1
MIZORAM	10	0	0	10	0	0	34	0	0	34	0	0	26	0	0	21	5	1
NAGALAND	11	0	0	11	0	0	18	0	0	18	0	0	8	0	0	8	0	0
ODISHA	1559	0	0	1559	0	0	1620	0	0	1620	0	0	1016	0	1	915	100	43
PONDICHERRY	17	0	0	17	0	0	17	0	0	17	0	0	8	0	0	8	0	0
PUNJAB	670	0	0	670	0	0	726	0	0	726	0	0	589	0	0	530	59	30
RAJASTHAN	1665	0	1	1664	0	0	1742	0	1	1741	0	0	1546	0	0	1334	212	110
SIKKIM	4	0	0	4	0	0	4	0	0	4	0	0	6	0	0	6	0	0
TAMIL NADU	707	0	0	707	0	0	727	0	0	727	0	0	420	0	0	378	42	10
TELANGANA	353	0	0	353	0	0	404	0	0	404	0	0	175	0	0	134	41	19
TRIPURA	45	0	0	45	0	0	30	0	0	30	0	0	44	0	0	38	6	4
UTTAR PRADESH	14988	0	5	14983	0	0	14780	0	6	14774	0	0	10782	0	0	9766	1016	270
UTTARAKHAND	342	0	0	342	0	0	394	0	0	394	0	0	232	0	0	215	17	5
WEST BENGAL	2359	0	1	2358	0	0	2953	0	0	2953	0	0	2026	0	0	1876	150	60
<b>TOTAL</b>	<b>46970</b>	<b>2</b>	<b>11</b>	<b>46957</b>	<b>0</b>	<b>0</b>	<b>46499</b>	<b>1</b>	<b>15</b>	<b>46483</b>	<b>0</b>	<b>0</b>	<b>32010</b>	<b>0</b>	<b>6</b>	<b>28697</b>	<b>3307</b>	<b>1107</b>

## AFP cases key surveillance indicators, 2015 - 2017

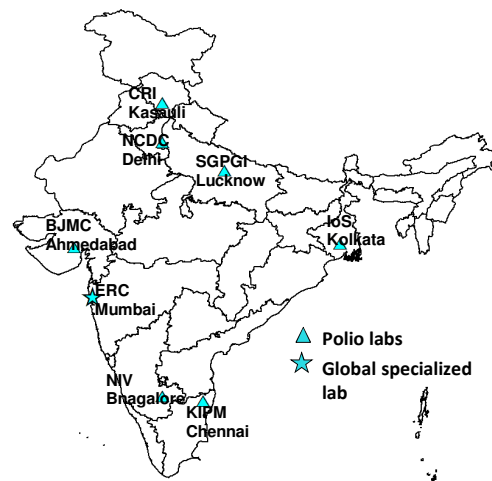
State/UT's	2015				2016				2017			
	Surveillance Indicators				Surveillance Indicators				Surveillance Indicators			
	Annualized Rates		Specimen		Annualized Rates		Specimen		Annualized Rates		Specimen	
	AFP rate	Non-polio AFP rate	% with 2 spec. w/in 14 days	% with any specimen	AFP rate	Non-polio AFP 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	2.22	2.22	50	100	7.61	7.61	86	86	2.49	2.49	100	100
ANDHRA PRADESH	3.52	3.52	90	98	3.38	3.38	89	96	2.35	1.98	89	97
ARUNACHAL PR.	3.28	3.28	80	100	3.37	3.37	71	100	1.87	1.31	80	100
ASSAM	2.49	2.49	98	99	2.81	2.81	96	99	2.49	2.28	93	98
BIHAR	27.96	27.96	86	98	23.83	23.83	88	99	17.04	15.40	89	98
CHANDIGARH	18.12	18.12	98	100	19.16	19.16	95	100	13.81	13.05	89	100
CHHATTISGARH	3.33	3.33	65	93	3.4	3.39	63	94	3.03	2.68	73	97
D&N HAVELI	8.43	8.43	71	86	7.14	7.14	83	100	6.79	6.79	100	100
DAMAN & DIU	20.97	20.97	92	92	14.93	14.93	100	100	13.81	12.28	100	100
DELHI	16.01	15.99	82	97	15.08	15.08	81	97	12.27	10.84	84	98
GOA	6.65	6.65	89	100	7.04	7.04	93	100	5.94	4.81	76	100
GUJARAT	3.93	3.93	83	94	4.67	4.67	84	94	5	4.48	83	95
HARYANA	9.39	9.39	81	97	9.04	9.04	84	98	8.09	7.37	85	98
HIMACHAL PRADESH	5.53	5.53	80	99	7.93	7.93	87	97	4.01	3.44	87	97
JAMMU & KASHMIR	2.74	2.74	99	100	3.44	3.44	93	99	4.68	4.53	94	100
JHARKHAND	8.28	8.27	81	96	8.37	8.35	81	96	7.08	6.24	80	97
KARNATAKA	5.56	5.55	85	98	5.43	5.43	82	97	3.67	3.15	82	97
KERALA	4.25	4.25	88	98	4.15	4.15	90	100	3.57	3.33	93	100
LAKSHADWEEP	5.88	5.88	100	100	0	0	NA	NA	0	0.00	NA	NA
MADHYA PRADESH	7.27	7.27	84	98	7.08	7.08	83	98	5.1	4.37	82	97
MAHARASHTRA	7.55	7.55	86	98	8.27	8.26	84	97	6.65	5.69	82	98
MANIPUR	3.28	3.28	84	100	1.99	1.99	62	100	2.52	2.43	96	100
MEGHALAYA	2.09	2.09	85	100	1.95	1.95	85	96	2.1	1.94	85	100
MIZORAM	2.21	2.21	50	90	6.71	6.71	91	97	6.75	5.45	77	100
NAGALAND	1.52	1.52	82	91	2.82	2.82	67	89	1.3	1.30	88	88
ODISHA	12.29	12.29	88	98	12.82	12.82	88	99	9.2	8.28	87	98
PONDICHERRY	4.27	4.27	100	100	4.17	4.17	94	94	2.93	2.93	100	100
PUNJAB	8.90	8.90	84	97	9.51	9.51	84	98	9	8.10	83	97
RAJASTHAN	6.93	6.92	84	97	7.12	7.11	82	95	7.4	6.38	82	97
SIKKIM	1.79	1.79	75	100	1.77	1.77	100	100	3.1	3.10	83	100
TAMIL NADU	3.86	3.86	93	99	3.94	3.94	95	99	2.81	2.53	95	99
TELANGANA	3.39	3.39	80	94	3.97	3.97	80	94	1.97	1.51	69	94
TRIPURA	2.91	2.91	89	100	1.85	1.85	77	100	4.04	3.49	84	100
UTTAR PRADESH	17.45	17.44	88	98	16.89	16.89	88	98	14.3	12.95	87	98
UTTARAKHAND	7.87	7.87	86	99	8.91	8.91	87	98	6.09	5.64	85	99
WEST BENGAL	7.29	7.29	90	98	9.43	9.43	93	99	7.78	7.20	90	99
<b>TOTAL</b>	<b>10.78</b>	<b>10.77</b>	<b>86</b>	<b>98</b>	<b>10.60</b>	<b>10.60</b>	<b>87</b>	<b>98</b>	<b>8.63</b>	<b>7.74</b>	<b>86</b>	<b>98</b>



**Table 3: Primary isolation results of AFP cases**

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	4450	191	27	945	3169	118	0	8912
NIV, Bangalore	2885	119	23	769	1888	76	10	5770
ERC, Mumbai	2051	124	12	354	1556	5	0	4081
IoS, Kolkata	4697	152	17	1099	3428	1	0	9371
NCDC, Delhi	4877	181	22	740	3751	183	0	9767
CRI, Kasauli	1595	17	2	253	1305	18	0	3206
KIPM, Chennai	2651	43	7	534	2065	2	0	5233
SGPGI, Lucknow	7575	250	35	1799	5280	211	0	15144
<b>TOTAL</b>	<b>30781</b>	<b>1077</b>	<b>145</b>	<b>6493</b>	<b>22442</b>	<b>614</b>	<b>10</b>	<b>61484</b>

**Polio laboratory network**



2016								
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	6098	233	26	1127	4712	0	0	12201
NIV, Bangalore	4395	190	35	1200	2970	0	0	8801
ERC, Mumbai	4940	158	14	1187	3581	0	0	10029
IoS, Kolkata	7146	91	21	1011	6023	0	0	14302
NCDC, Delhi	6933	212	20	885	5816	0	0	13868
CRI, Kasauli	2066	35	0	276	1755	0	0	4152
KIPM, Chennai	5122	89	9	954	4070	0	0	10238
SGPGI, Lucknow	8811	281	29	1551	6950	0	0	17610
<b>TOTAL</b>	<b>45511</b>	<b>1289</b>	<b>154</b>	<b>8191</b>	<b>35877</b>	<b>0</b>	<b>0</b>	<b>91201</b>

**Table 4: Intratypic differentiation (ITD) of isolates from AFP cases**

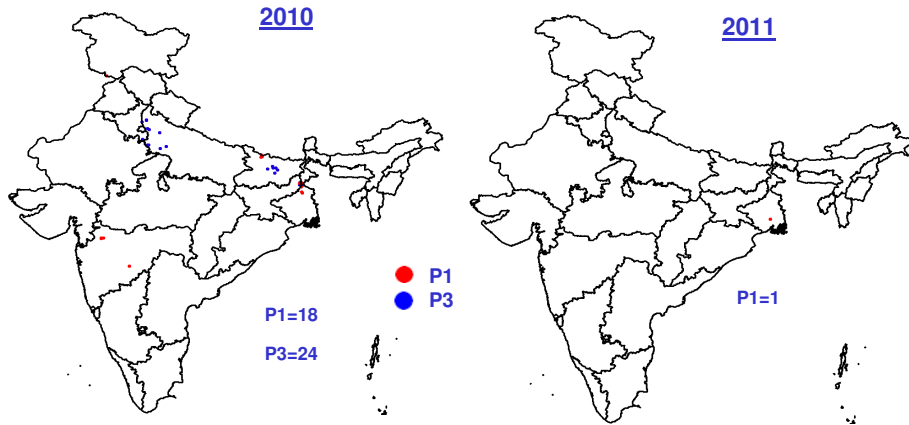
2017																		
Polio Laboratories	Number of AFP cases referred for ITD	Number of AFP cases with ITD result as														Number of cases pending for		
		Wild poliovirus				Vaccine poliovirus				VDPV			NPEV by PCR	Non enterovirus	Negative	<=7 days	8-14 days	>14 days
		Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3						
BJMC, Ahmedabad	218	0	0	0	0	77	0	59	76	0	0	0	6	0	0	0	0	0
NIV, Bangalore	143	0	0	0	0	54	0	32	43	0	0	0	14	0	0	0	0	0
ERC, Mumbai	141	0	0	0	0	48	0	41	35	0	0	0	15	0	0	2	0	0
IoS, Kolkata	162	0	0	0	0	54	0	39	51	0	0	0	15	3	0	0	0	0
NCDC, Delhi	203	0	0	0	0	56	0	85	53	0	0	0	7	0	0	2	0	0
CRI, Kasauli	20	0	0	0	0	11	0	5	4	0	0	0	0	0	0	0	0	0
KIPM, Chennai	49	0	0	0	0	9	0	27	13	0	0	0	0	0	0	0	0	0
SGPGI, Lucknow	286	0	0	0	0	59	0	98	62	0	0	0	25	41	0	1	0	0
<b>TOTAL</b>	<b>1222</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>368</b>	<b>0</b>	<b>386</b>	<b>337</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>82</b>	<b>44</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>

2016																		
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	258	0	0	0	0	78	25	74	80	0	0	0	1	0	0	0	0	0
NIV, Bangalore	225	0	0	0	0	56	24	67	70	0	0	0	6	2	0	0	0	0
ERC, Mumbai	172	0	0	0	0	53	13	52	43	0	0	0	11	0	0	0	0	0
IoS, Kolkata	113	0	0	0	0	26	18	35	33	0	0	0	0	1	0	0	0	0
NCDC, Delhi	231	0	0	0	0	47	38	91	52	0	0	0	3	0	0	0	0	0
CRI, Kasauli	35	0	0	0	0	5	7	11	12	0	0	0	0	0	0	0	0	0
KIPM, Chennai	98	0	0	0	0	26	17	26	28	0	1	0	0	0	0	0	0	0
SGPGI, Lucknow	311	0	0	0	0	56	53	86	66	0	0	0	16	34	0	0	0	0
<b>TOTAL</b>	<b>1443</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>347</b>	<b>195</b>	<b>442</b>	<b>384</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>37</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Most recent Wild Polio Virus case by State**

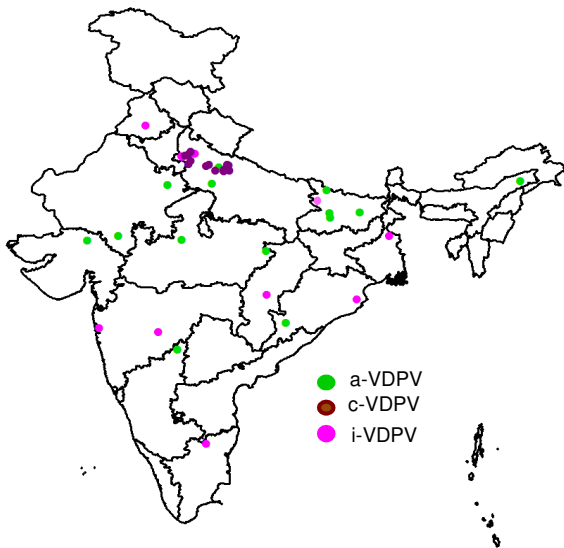
State	Date of most recent polio case	Type
West Bengal	13-Jan-11	P1
Jharkhand	22-Oct-10	P3
Maharashtra	16-Sep-10	P1
Bihar	01-Sep-10	P1
Uttar Pradesh	21-Apr-10	P3
Jammu & Kashmir	07-Feb-10	P1
Haryana	13-Jan-10	P3
Rajasthan	27-Nov-09	P3
Uttarakhand	06-Nov-09	P3
Himachal Pradesh	17-Oct-09	P3
Punjab	13-Oct-09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

**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
January	112	36	36	7	18	51	4	10	8	24	112	14	16	1	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
March	42	11	10	3	7	9	1	1	8	14	40	16	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
May	49	39	6	4	42	5	9	2	36	32	34	24	2	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
July	324	142	25	30	251	25	13	3	121	64	53	89	5	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
September	283	193	32	33	334	30	18	14	137	82	49	145	3	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
November	226	155	31	43	180	16	14	7	55	203	24	60	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
<b>Total</b>	<b>1934</b>	<b>1126</b>	<b>265</b>	<b>268</b>	<b>1600</b>	<b>225</b>	<b>134</b>	<b>66</b>	<b>676</b>	<b>874</b>	<b>559</b>	<b>741</b>	<b>42</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**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						
<b>Total</b>	<b>1</b>	<b>1</b>	<b>15</b>	<b>18</b>	<b>9</b>	<b>1</b>

