

# AFP Surveillance Bulletin - India

Report for week 26, ending 29 June 2019

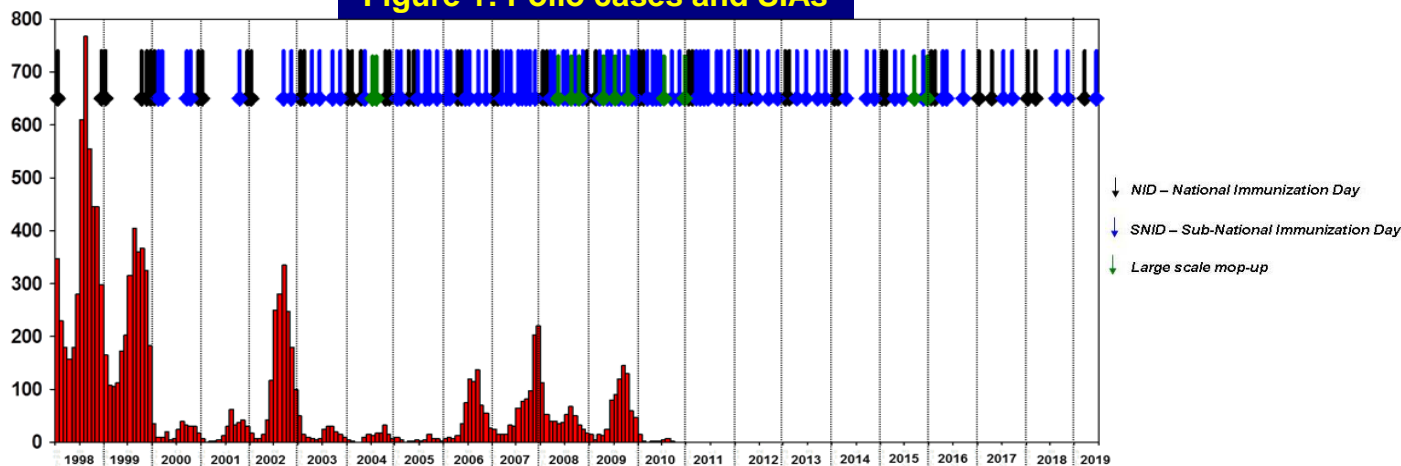
**Table 1: AFP cases by month of paralysis onset, last 13 months**

State/UT's	Total AFP cases in 2018	AFP cases as on week 26, 2018	AFP cases as on week 26, 2019	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
A&N ISLANDS	8	6	1	0	0	1	0	1	0	0	1	0	0	0	0	0
ANDHRA PRADESH	416	186	186	24	34	40	32	37	32	43	39	24	33	31	34	25
ARUNACHAL PR.	10	2	8	0	0	1	0	0	5	2	4	0	3	0	1	0
ASSAM	271	121	139	28	29	15	22	17	15	36	23	20	18	26	32	20
BIHAR	7047	3036	3021	581	618	606	686	736	608	504	448	441	610	536	605	381
CHANDIGARH	55	23	30	1	4	5	8	7	3	5	8	3	5	7	5	2
CHHATTISGARH	248	103	149	20	17	22	27	21	15	26	27	25	28	36	29	4
D&N HAVELI	3	2	1	0	0	0	1	0	0	0	1	0	0	0	0	0
DAMAN & DIU	4	2	3	0	0	0	0	0	1	1	0	1	0	1	1	0
DELHI	686	292	353	47	51	52	64	55	62	66	86	54	67	56	51	39
GOA	25	7	22	4	2	1	3	3	1	5	4	4	7	2	4	1
GUJARAT	938	477	414	83	92	83	77	56	50	70	80	85	74	61	71	43
HARYANA	819	295	384	54	59	67	96	107	76	68	75	66	74	87	67	15
HIMACHAL PRADESH	74	39	35	3	3	8	4	2	10	6	7	3	8	3	13	1
JAMMU & KASHMIR	209	91	106	18	14	22	20	8	15	17	16	15	21	26	16	12
JHARKHAND	868	363	449	62	72	88	77	97	71	64	99	75	95	71	67	42
KARNATAKA	849	300	366	62	95	87	82	97	62	83	79	60	66	59	85	17
KERALA	301	131	167	23	33	36	19	20	22	22	34	33	27	35	29	9
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	1861	785	767	159	173	181	168	186	152	128	115	138	135	144	152	83
MAHARASHTRA	1920	833	767	144	190	231	185	145	113	114	125	131	150	131	140	90
MANIPUR	31	8	19	6	3	3	4	5	1	3	5	2	4	4	4	0
MEGHALAYA	20	11	14	2	2	2	0	2	1	1	0	0	5	5	2	2
MIZORAM	32	7	16	3	3	5	4	4	6	2	0	2	4	5	4	1
NAGALAND	13	5	8	3	2	0	1	1	1	0	3	1	0	1	3	0
ODISHA	956	354	379	65	101	107	98	113	63	86	78	61	76	60	61	43
PONDICHERRY	25	7	6	0	6	3	1	0	5	3	0	1	2	0	2	1
PUNJAB	514	192	334	24	39	39	46	56	45	60	97	65	53	41	56	22
RAJASTHAN	1605	713	728	137	128	137	145	137	121	132	136	135	134	123	145	55
SIKKIM	5	2	8	0	0	0	0	0	2	1	1	2	0	1	4	0
TAMIL NADU	817	372	373	53	91	67	47	55	81	70	65	82	83	61	61	21
TELANGANA	364	133	209	29	29	28	28	35	49	48	52	35	31	36	33	22
TRIPURA	25	14	12	3	1	3	4	1	0	0	1	2	4	3	2	0
UTTAR PRADESH	12893	4597	5496	1113	1074	1182	1716	1460	1158	992	961	992	1080	887	1021	555
UTTARAKHAND	255	83	161	20	22	14	28	27	33	25	22	45	38	17	27	12
WEST BENGAL	2170	906	875	167	215	263	247	174	149	126	128	156	200	158	149	84
<b>TOTAL</b>	<b>36337</b>	<b>14498</b>	<b>16006</b>	<b>2938</b>	<b>3202</b>	<b>3399</b>	<b>3940</b>	<b>3665</b>	<b>3028</b>	<b>2809</b>	<b>2820</b>	<b>2759</b>	<b>3135</b>	<b>2714</b>	<b>2976</b>	<b>1602</b>

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

Data from weekly case based reports

**Figure 1: Polio cases and SIAs**



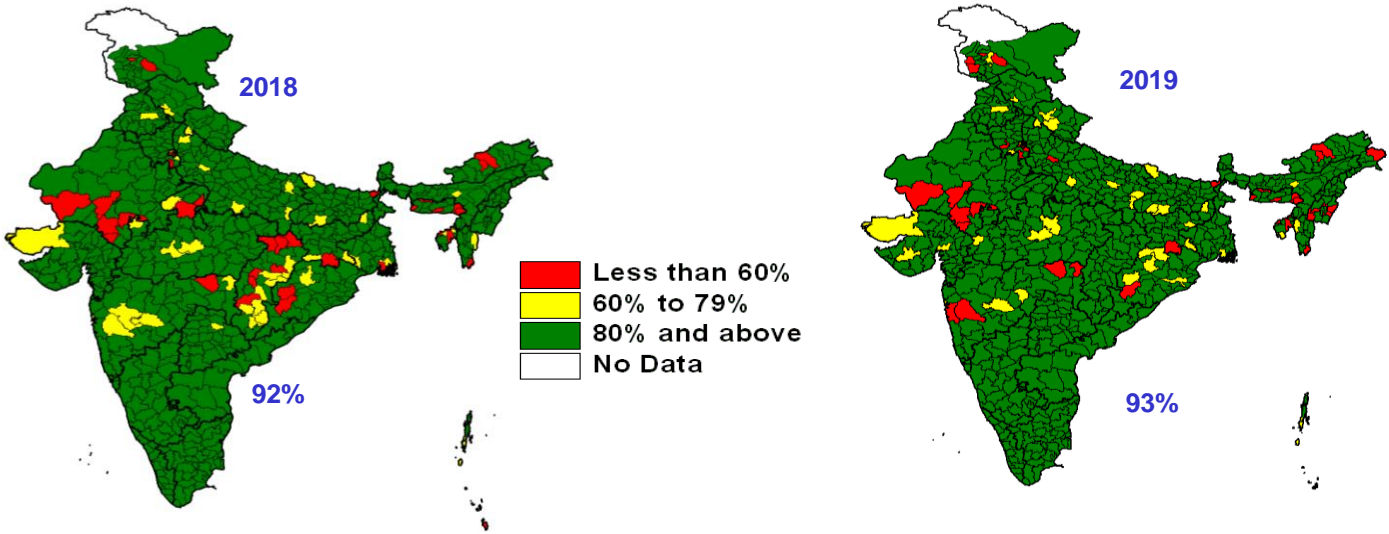
**Table 2: AFP cases key surveillance indicators, 2017 - 2019**

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	416	0	0	407	9	9	186	0	0	142	44	9
ARUNACHAL PR.	11	0	0	11	0	0	10	0	0	10	0	0	8	0	0	6	2	2
ASSAM	308	0	3	305	0	0	271	0	0	270	1	1	139	0	0	107	32	5
BIHAR	8416	0	10	8406	0	0	7047	0	3	6993	51	51	3021	0	0	2519	502	65
CHANDIGARH	63	0	0	63	0	0	55	0	0	55	0	0	30	0	0	27	3	0
CHHATTISGARH	332	0	0	332	0	0	248	0	0	241	7	7	149	0	0	114	35	16
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	3	0	0	3	0	0
DELHI	707	0	0	707	0	0	686	0	0	665	21	21	353	0	0	270	83	42
GOA	27	0	0	27	0	0	25	0	0	25	0	0	22	0	0	18	4	2
GUJARAT	993	0	1	992	0	0	938	0	0	924	14	14	414	0	0	341	73	18
HARYANA	964	0	0	964	0	0	819	0	0	807	12	12	384	0	0	322	62	33
HIMACHAL PRADESH	83	0	0	83	0	0	74	0	0	74	0	0	35	0	0	31	4	0
JAMMU & KASHMIR	301	0	0	301	0	0	209	0	0	209	0	0	106	0	0	102	4	1
JHARKHAND	909	0	0	909	0	0	868	0	0	853	15	15	449	0	0	366	83	31
KARNATAKA	663	0	1	662	0	0	849	0	1	840	8	8	366	0	0	306	60	18
KERALA	313	0	0	313	0	0	301	0	0	299	2	2	167	0	0	142	25	5
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	1829	31	31	767	0	0	586	181	45
MAHARASHTRA	2284	0	1	2283	0	0	1920	0	0	1910	10	10	767	0	0	556	211	62
MANIPUR	33	0	0	33	0	0	31	0	0	31	0	0	19	0	0	14	5	2
MEGHALAYA	27	0	0	27	0	0	20	0	0	19	1	1	14	0	0	10	4	1
MIZORAM	30	0	0	30	0	0	32	0	0	31	1	1	16	0	0	10	6	0
NAGALAND	11	0	0	11	0	0	13	0	0	13	0	0	8	0	0	8	0	0
ODISHA	1225	0	1	1224	0	0	956	0	0	944	12	12	379	0	0	305	74	18
PONDICHERRY	11	0	0	11	0	0	25	0	0	25	0	0	6	0	0	5	1	0
PUNJAB	696	0	0	696	0	0	514	0	0	502	12	12	334	0	0	292	42	11
RAJASTHAN	1885	0	1	1884	0	0	1605	0	0	1561	44	44	728	0	0	581	147	53
SIKKIM	6	0	0	6	0	0	5	0	0	5	0	0	8	0	0	8	0	0
TAMIL NADU	549	0	0	549	0	0	817	0	0	817	0	0	373	0	0	335	38	7
TELANGANA	248	0	0	248	0	0	364	0	0	357	7	7	209	0	0	159	50	10
TRIPURA	51	0	0	51	0	0	25	0	0	24	1	1	12	0	0	9	3	1
UTTAR PRADESH	13114	0	14	13100	0	0	12893	0	5	12764	124	124	5496	0	0	4636	860	280
UTTARAKHAND	274	0	1	273	0	0	255	0	0	249	6	6	161	0	0	131	30	12
WEST BENGAL	2478	0	3	2475	0	0	2170	0	2	2144	24	24	875	0	0	764	111	22
<b>TOTAL</b>	<b>39127</b>	<b>0</b>	<b>37</b>	<b>39090</b>	<b>0</b>	<b>0</b>	<b>36337</b>	<b>0</b>	<b>12</b>	<b>35912</b>	<b>413</b>	<b>413</b>	<b>16006</b>	<b>0</b>	<b>0</b>	<b>13226</b>	<b>2780</b>	<b>772</b>

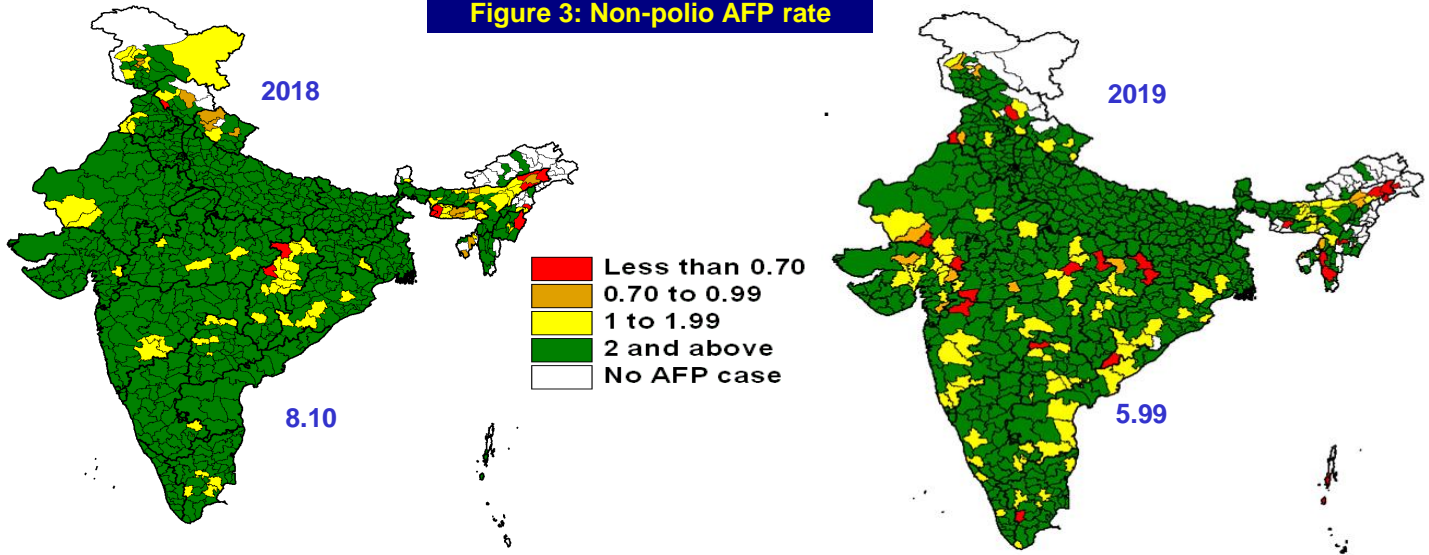
**Table 3: AFP cases key surveillance indicators, 2017 - 2019**

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	1.96	0.00	0	100
ANDHRA PRADESH	2.57	2.57	86	96	3.14	3.08	79	94	3.4	2.60	87	98
ARUNACHAL PR.	1.74	1.74	82	100	1.49	1.49	90	100	2.3	1.73	75	100
ASSAM	2.56	2.53	94	99	2.21	2.2	93	98	2.25	1.73	91	99
BIHAR	17.65	17.63	89	98	14.31	14.2	88	98	12.06	10.05	90	98
CHANDIGARH	13.64	13.64	89	100	11.7	11.7	96	98	18.4	16.56	93	100
CHHATTISGARH	2.99	2.99	73	96	2.26	2.19	67	94	3.65	2.79	69	95
D&N HAVELI	8.05	8.05	86	100	3.33	3.33	100	100	2.17	2.17	0	0
DAMAN & DIU	15.58	15.58	100	100	6.9	6.9	100	100	9.38	9.38	67	100
DELHI	12.72	12.72	83	97	11.76	11.4	80	97	11.86	9.07	80	94
GOA	6.46	6.46	74	96	5.9	5.9	60	96	10.26	8.39	91	95
GUJARAT	5.02	5.02	83	95	4.93	4.85	82	95	4.26	3.51	87	95
HARYANA	8.58	8.58	85	98	7.15	7.05	85	99	6.58	5.52	84	99
HIMACHAL PRADESH	4.02	4.02	84	98	3.53	3.53	84	99	3.3	2.92	94	97
JAMMU & KASHMIR	5.44	5.44	93	100	3.74	3.74	96	99	3.7	3.56	96	100
JHARKHAND	7.33	7.33	79	96	6.76	6.64	77	96	7.23	5.90	80	95
KARNATAKA	3.76	3.75	82	97	4.73	4.68	83	96	4.01	3.36	85	98
KERALA	3.63	3.63	91	100	3.47	3.45	90	99	3.83	3.26	88	99
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	5.51	81	97	4.54	3.47	81	97
MAHARASHTRA	6.85	6.85	83	98	5.69	5.66	81	97	4.49	3.25	76	96
MANIPUR	2.51	2.51	97	100	2.9	2.9	94	97	3.53	2.60	100	100
MEGHALAYA	1.85	1.85	85	100	1.33	1.26	80	100	1.81	1.29	79	100
MIZORAM	6.59	6.59	80	100	7.31	7.08	72	100	7.49	4.68	69	94
NAGALAND	1.51	1.51	73	91	1.99	1.99	62	85	2.19	2.19	100	100
ODISHA	9.38	9.37	88	99	7.32	7.23	87	99	5.66	4.55	84	96
PONDICHERRY	3.41	3.41	91	100	7.65	7.65	96	100	3.61	3.01	100	100
PUNJAB	9.00	9.00	84	97	6.56	6.4	81	96	8.41	7.35	87	97
RAJASTHAN	7.63	7.63	83	97	6.38	6.21	85	96	5.7	4.55	84	97
SIKKIM	2.62	2.62	83	100	2.16	2.16	100	100	6.75	6.75	100	100
TAMIL NADU	3.11	3.11	95	99	4.61	4.61	94	99	4.25	3.82	94	99
TELANGANA	2.36	2.36	72	96	3.53	3.46	70	97	3.99	3.04	75	98
TRIPURA	3.96	3.96	86	100	2.51	2.4	92	100	2.37	1.78	83	100
UTTAR PRADESH	14.72	14.70	86	98	14.21	14.07	84	97	11.89	10.03	87	98
UTTARAKHAND	6.09	6.06	84	98	5.56	5.43	74	95	6.9	5.61	84	96
WEST BENGAL	8.05	8.04	91	99	7.02	6.94	91	99	6.04	5.27	90	99
<b>TOTAL</b>	<b>8.93</b>	<b>8.92</b>	<b>86</b>	<b>98</b>	<b>8.19</b>	<b>8.10</b>	<b>85</b>	<b>97</b>	<b>7.24</b>	<b>5.99</b>	<b>86</b>	<b>97</b>

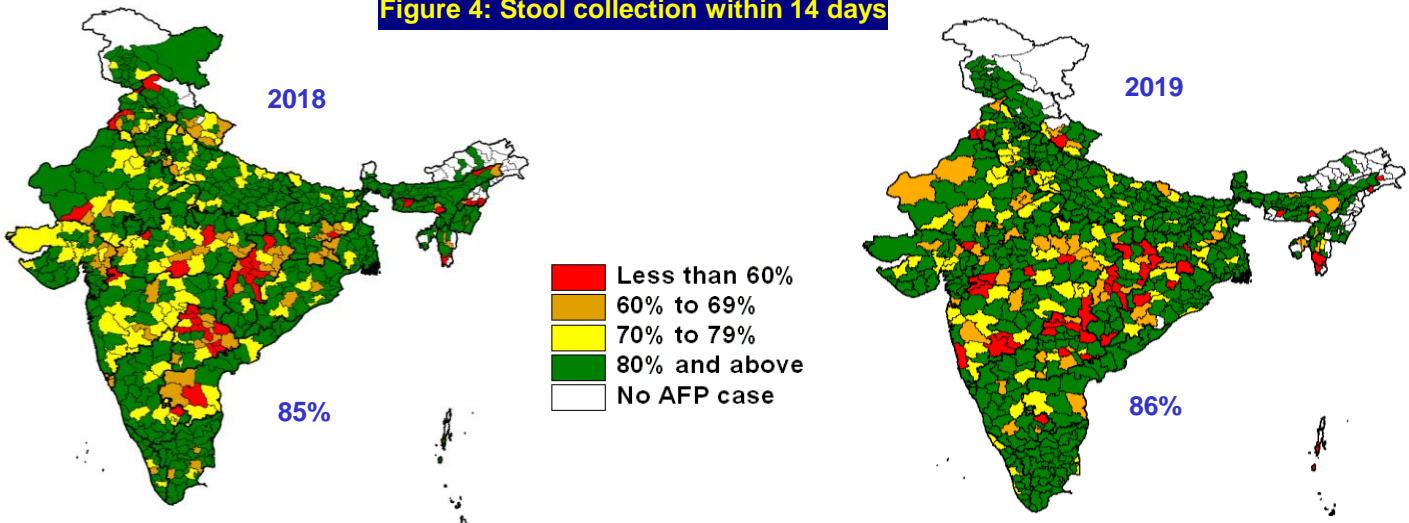
**Figure 2: Timeliness of Reporting Units**



**Figure 3: Non-polio AFP rate**



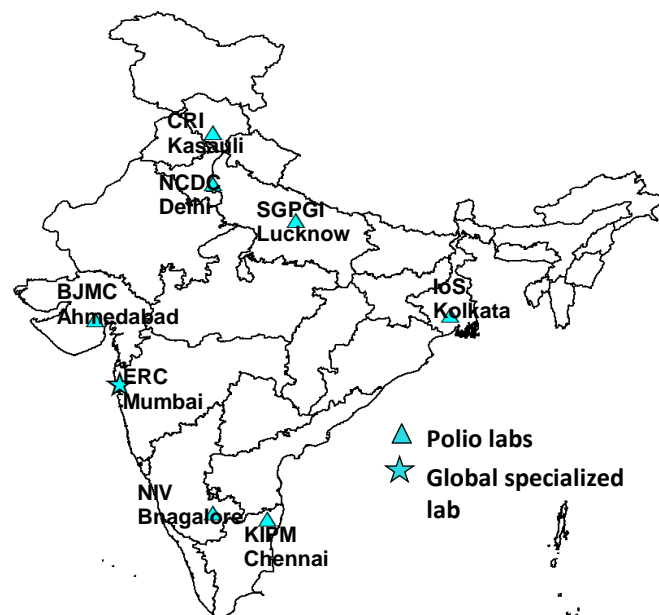
**Figure 4: Stool collection within 14 days**



**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	2193	72	7	332	1632	150	0	4389
NIV, Bangalore	1231	35	2	192	924	76	2	2458
ERC, Mumbai	1354	44	1	159	1112	22	16	2693
IoS, Kolkata	2044	61	3	220	1758	1	1	4063
NCDC, Delhi	2563	121	6	258	2140	38	0	5090
CRI, Kasauli	637	9	1	55	552	20	0	1279
KIPM, Chennai	1455	26	0	183	1246	0	0	2904
SGPGI, Lucknow	3270	146	2	389	2546	187	0	6530
<b>TOTAL</b>	<b>14747</b>	<b>514</b>	<b>22</b>	<b>1788</b>	<b>11910</b>	<b>494</b>	<b>19</b>	<b>29406</b>

**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	4711	186	26	940	3559	0	0	9431
NIV, Bangalore	3103	101	13	816	2173	0	0	6225
ERC, Mumbai	3711	113	11	796	2791	0	0	7426
IoS, Kolkata	4993	153	12	846	3982	0	0	9980
NCDC, Delhi	6111	136	12	852	5111	0	0	12212
CRI, Kasauli	1776	19	1	201	1555	0	0	3557
KIPM, Chennai	3776	82	4	625	3065	0	0	7542
SGPGI, Lucknow	7223	133	16	1292	5782	0	0	14675
<b>TOTAL</b>	<b>35404</b>	<b>923</b>	<b>95</b>	<b>6368</b>	<b>28018</b>	<b>0</b>	<b>0</b>	<b>71048</b>

**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	79	0	0	0	0	16	0	22	35	0	0	0	4	0	0	1	1	0
NIV, Bangalore	37	0	0	0	0	10	0	14	10	0	0	0	2	1	0	0	0	0
ERC, Mumbai	45	0	0	0	0	16	0	15	13	0	0	0	1	0	0	0	0	0
IoS, Kolkata	64	0	0	0	0	24	0	19	20	0	0	0	0	0	0	1	0	0
NCDC, Delhi	127	0	0	0	0	26	0	51	45	0	0	0	4	0	0	1	0	0
CRI, Kasauli	10	0	0	0	0	2	0	3	5	0	0	0	0	0	0	0	0	0
KIPM, Chennai	26	0	0	0	0	10	0	9	7	0	0	0	0	0	0	0	0	0
SGPGI, Lucknow	148	0	0	0	0	40	0	49	57	0	0	0	1	1	0	0	0	0
<b>TOTAL</b>	<b>536</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>144</b>	<b>0</b>	<b>182</b>	<b>192</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>

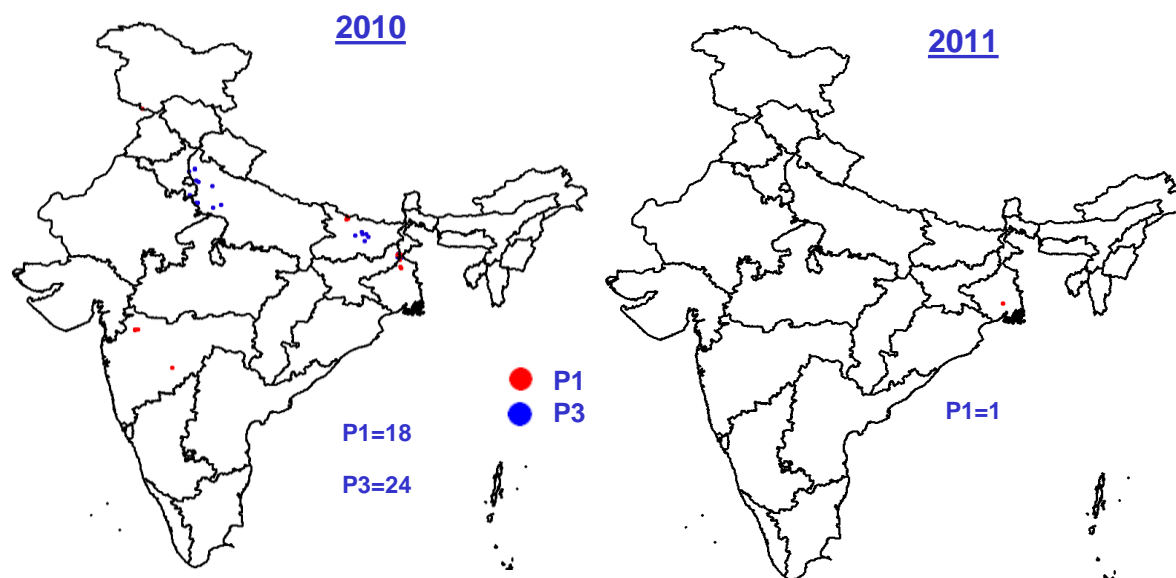
2018																		
Polio Laboratories	Number of AFP cases referred for ITD	Number of AFP cases with ITD result as														Number of cases pending for		
		Wild poliovirus				Vaccine poliovirus				VDPV			NPEV by PCR	Non enterovirus	Negative	<=7 days	8-14 days	>14 days
		Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3	Mix	Type 1	Type 2	Type 3						
BJMC, Ahmedabad	213	0	0	0	0	50	0	68	89	0	0	0	6	0	0	0	0	0
NIV, Bangalore	114	0	0	0	0	29	0	40	39	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	165	0	0	0	0	47	0	47	60	0	0	0	10	1	0	0	0	0
NCDC, Delhi	147	0	0	0	0	37	0	67	41	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	150	0	0	0	0	44	1	55	48	0	0	0	1	0	1	0	0	0
<b>TOTAL</b>	<b>1018</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>265</b>	<b>1</b>	<b>355</b>	<b>351</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>



**Table 6: Most recent Wild Polio Virus case by State**

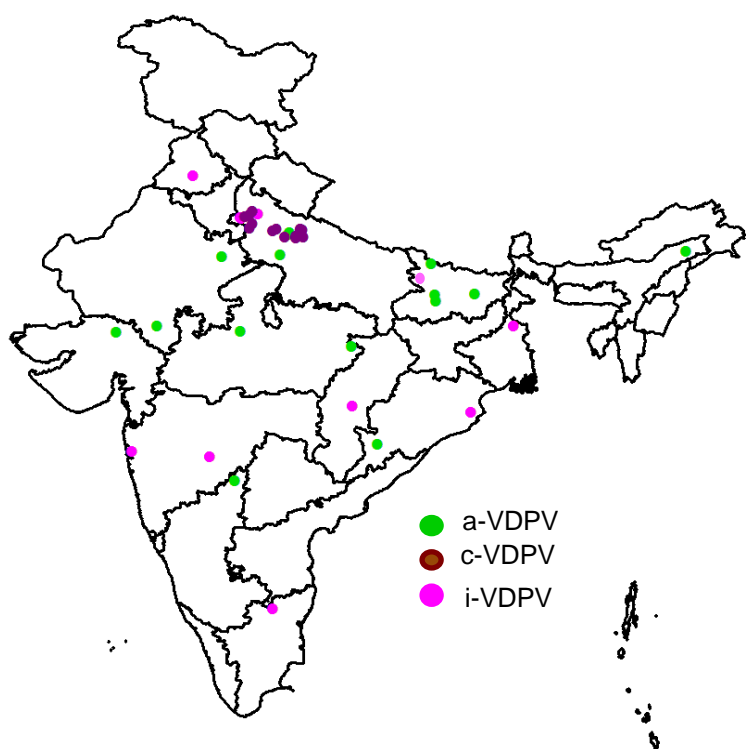
State	Date of most recent polio case	Type
West Bengal	13-Jan-11	P1
Jharkhand	22-Oct-10	P3
Maharashtra	16-Sep-10	P1
Bihar	01-Sep-10	P1
Uttar Pradesh	21-Apr-10	P3
Jammu & Kashmir	07-Feb-10	P1
Haryana	13-Jan-10	P3
Rajasthan	27-Nov-09	P3
Uttarakhand	06-Nov-09	P3
Himachal Pradesh	17-Oct-09	P3
Punjab	13-Oct-09	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
<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>	<b>0</b>	<b>0</b>

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

