

AFP Surveillance Bulletin - India

Report for week 28, ending 17 July 2010

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

State/UT's	Total AFP cases in 2009	AFP cases as on week 28, 2009	AFP cases as on week 28, 2010	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10
Andhra Pradesh	855	368	401	96	97	66	95	73	55	66	66	47	72	78	62	10
Andaman & Nicobar	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Arunachal Pradesh	24	13	4	3	0	0	7	0	0	0	1	0	0	1	2	0
Assam	542	252	226	59	58	29	54	35	38	34	34	32	31	48	44	3
Bihar	13510	6128	7033	1363	1359	1324	1244	1078	928	1001	814	1095	1302	1330	1241	250
Chandigarh	24	7	12	3	6	7	1	0	1	2	4	0	4	1	1	0
Chhattisgarh	519	225	201	44	60	65	43	40	32	33	27	30	32	34	37	8
D & N Haveli	5	2	3	0	3	0	0	0	0	0	0	2	0	0	1	0
Daman & Diu	3	2	2	0	1	0	0	0	0	1	0	1	0	0	0	0
Delhi	311	145	184	18	23	31	30	28	25	24	27	26	33	44	27	3
Goa	13	7	12	2	0	0	1	3	0	1	3	2	1	2	2	1
Gujarat	794	351	395	80	102	83	57	56	61	52	54	68	57	73	78	13
Haryana	680	285	321	58	84	59	56	63	58	60	72	52	38	52	44	3
Himachal Pradesh	103	42	81	12	12	11	12	9	4	5	9	23	13	15	15	1
Jammu & Kashmir	178	77	86	12	12	16	22	17	14	10	21	13	14	20	8	0
Jharkhand	1493	700	554	196	176	136	104	97	61	79	74	82	88	110	105	16
Karnataka	774	351	387	81	76	81	63	56	52	55	62	65	61	76	62	6
Kerala	326	167	169	35	26	26	25	20	20	26	21	34	21	30	33	4
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	2723	1071	1156	295	343	330	253	219	189	198	158	197	200	195	203	5
Maharashtra	2255	957	1039	225	255	255	193	174	156	164	139	162	166	155	198	55
Manipur	21	9	8	5	2	3	0	2	0	0	3	0	1	2	2	0
Meghalaya	33	17	14	4	1	1	2	4	1	1	1	2	3	3	3	1
Mizoram	8	3	4	1	1	1	0	2	0	0	0	3	0	0	1	0
Nagaland	27	12	12	3	2	2	2	6	0	1	2	3	2	3	1	0
Orissa	1483	581	587	150	178	148	162	123	106	77	80	101	104	87	110	28
Pondicherry	16	7	5	0	3	0	3	3	0	0	1	1	0	1	2	0
Punjab	456	188	173	51	52	44	40	36	35	37	33	41	18	26	14	4
Rajasthan	1439	671	589	128	152	128	110	106	103	99	94	85	108	93	95	15
Sikkim	3	2	4	1	0	0	0	0	0	0	0	0	2	2	0	0
Tamil Nadu	604	257	304	48	66	65	44	62	45	59	48	44	42	52	56	3
Tripura	60	29	35	4	7	3	7	5	4	3	7	9	2	9	5	0
Uttarakhand	347	140	141	28	43	35	30	33	31	23	17	27	23	21	23	7
Uttar Pradesh	18787	7377	9116	1849	1994	2011	2010	1702	1485	1472	1211	1424	1529	1701	1533	246
West Bengal	1995	895	948	245	206	156	179	176	121	130	131	171	135	162	177	42
TOTAL	50411	21338	24207	5099	5400	5116	4849	4228	3625	3713	3214	3842	4102	4426	4186	724

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

Data from weekly case based reports

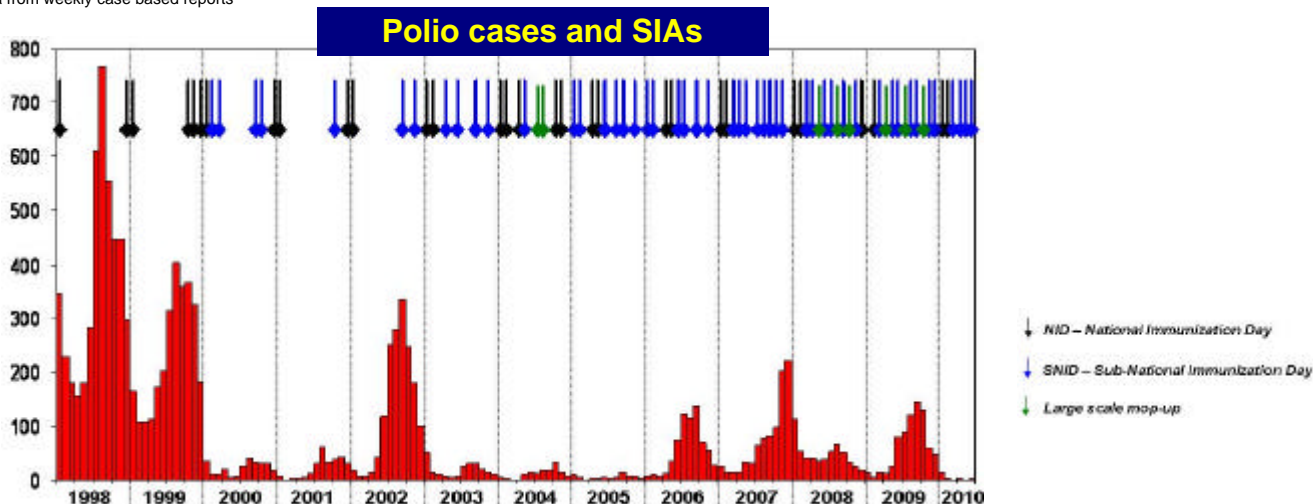


Table 2: Classification of AFP cases and key surveillance indicators, 2009 and 2010

State/UT's	2009										2010											
	AFP							Surveillance Indicators			AFP							Surveillance Indicators				
	AFP Cases	Case Classification					Annualized Rates		Specimen		AFP Cases	Case Classification					Annualized Rates		Specimen			
		Confirmed Polio ¹	MDPV	Compatible	Discarded (non-polio AFP)	Pending	AFP rate	Non-polio AFP rate	% with 2 spec. w/in 14 days	% with any specimen		Confirmed Polio ²	MDPV	Compatible	Discarded (non-polio AFP)	Pending	AFP rate	Non-polio AFP rate	% with 2 spec. w/in 14 days	% with any specimen		
				Total	> 90 Days									Total	> 90 Days							
Andhra Pradesh	855	0	0	4	851	0	0	3.08	3.07	86	98	401	0	0	0	338	63	23	2.64	2.23	85	96
Andaman & Nicobar	0	0	0	0	0	0	0	0.00	0.00	0	0	1	0	0	0	0	1	0	1.42	0.00	100	100
Arunachal Pradesh	24	0	0	0	24	0	0	4.55	4.55	71	100	4	0	0	0	2	2	1	1.36	0.68	75	100
Assam	542	0	1	2	539	0	0	4.41	4.39	87	97	226	0	0	0	196	30	9	3.37	2.92	88	98
Bihar	13510	117	3	183	13195	12	12	33.45	32.67	86	97	7033	6	0	3	6043	981	334	31.45	27.03	87	98
Chandigarh	24	0	0	0	24	0	0	4.52	4.52	83	100	12	0	0	0	9	3	3	3.38	2.54	75	100
Chhattisgarh	519	0	0	1	517	1	1	5.41	5.39	72	96	201	0	0	0	138	63	24	3.81	2.61	76	97
D & N Haveli	5	0	0	0	5	0	0	4.31	4.31	80	100	3	0	0	0	1	2	1	4.68	1.56	33	100
Daman & Diu	3	0	0	0	3	0	0	2.91	2.91	100	100	2	0	0	0	2	0	0	3.41	3.41	50	100
Delhi	311	4	0	2	303	2	2	4.42	4.30	70	95	184	0	0	0	139	45	16	4.76	3.60	77	95
Goa	13	0	0	0	13	0	0	2.63	2.63	85	100	12	0	0	0	11	1	0	4.47	4.09	58	92
Gujarat	794	0	0	1	792	1	1	3.78	3.77	87	96	395	0	0	0	321	74	23	3.42	2.78	81	94
Haryana	680	4	0	7	668	1	1	6.91	6.79	81	98	321	1	0	0	272	48	28	5.96	5.05	83	97
Himachal Pradesh	103	1	0	0	102	0	0	4.77	4.72	88	99	81	0	0	0	72	9	5	6.85	6.09	89	96
Jammu & Kashmir	178	0	0	0	178	0	0	3.59	3.59	96	99	86	1	0	0	83	2	1	3.11	3.00	97	100
Jharkhand	1493	2	0	6	1483	2	2	11.38	11.30	84	96	554	0	0	0	454	100	32	8.05	6.60	87	98
Karnataka	774	0	0	0	773	1	1	4.28	4.27	79	97	387	0	0	0	313	74	24	3.77	3.05	83	96
Kerala	326	0	0	0	326	0	0	3.83	3.83	78	96	169	0	0	0	152	17	3	3.47	3.12	91	98
Lakshadweep	0	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0
Madhya Pradesh	2723	0	0	3	2718	2	2	9.41	9.40	82	98	1156	0	0	0	976	180	76	7.27	6.14	84	98
Maharashtra	2255	0	0	0	2255	0	0	5.86	5.86	82	97	1039	1	0	0	821	217	57	5.03	3.98	81	97
Manipur	21	0	0	0	21	0	0	2.05	2.05	100	100	8	0	0	0	7	1	0	1.42	1.25	100	100
Meghalaya	33	0	0	0	33	0	0	2.96	2.96	85	100	14	0	0	0	13	1	0	2.22	2.06	100	100
Mizoram	8	0	0	0	8	0	0	1.94	1.94	88	100	4	0	0	0	3	1	0	1.76	1.32	75	100
Nagaland	27	0	0	0	27	0	0	2.33	2.33	93	100	12	0	0	0	12	0	0	1.84	1.84	100	100
Orissa	1483	0	0	7	1450	26	26	10.92	10.68	82	96	587	0	0	0	449	138	46	7.93	6.07	83	98
Pondicherry	16	0	0	0	16	0	0	4.80	4.80	88	100	5	0	0	0	5	0	0	2.74	2.74	100	100
Punjab	456	4	0	2	449	1	1	4.60	4.52	78	97	173	0	0	0	141	32	13	3.89	3.17	79	98
Rajasthan	1439	3	0	6	1430	0	0	5.34	5.30	78	96	589	0	0	0	454	135	49	3.97	3.06	76	95
Sikkim	3	0	0	0	3	0	0	1.22	1.22	100	100	4	0	0	0	4	0	0	2.92	2.92	100	100
Tamil Nadu	604	0	0	0	603	1	1	3.28	3.28	90	99	304	0	1	0	273	31	7	3.42	3.07	92	99
Tripura	60	0	0	0	60	0	0	4.22	4.22	98	100	35	0	0	0	33	2	0	4.45	4.19	91	100
Uttarakhand	347	4	0	4	339	0	0	8.98	8.77	81	96	141	0	0	0	120	21	6	6.72	5.72	86	96
Uttar Pradesh	18787	602	17	232	17899	37	37	23.63	22.52	81	96	9116	10	2	4	7327	1773	627	20.74	16.67	82	97
West Bengal	1995	0	0	7	1988	0	0	6.42	6.40	88	98	948	5	0	0	788	155	41	5.33	4.43	88	98
TOTAL	50411	741	21	467	49095	87	87	11.64	11.34	83	97	24207	24	3	7	19972	4201	1449	10.23	8.44	84	97

AFP cases > 15 years of age or missing age information are excluded

1 Includes 39 index cases (type 1 - 1 in Bihar; type 3 - 2 in Bihar, 36 in Uttar Pradesh) with contact specimen positive for wild poliovirus in 2009

2 Includes 1 index case (type 3 - 1 in Uttar Pradesh) with contact specimen positive for wild poliovirus in 2010

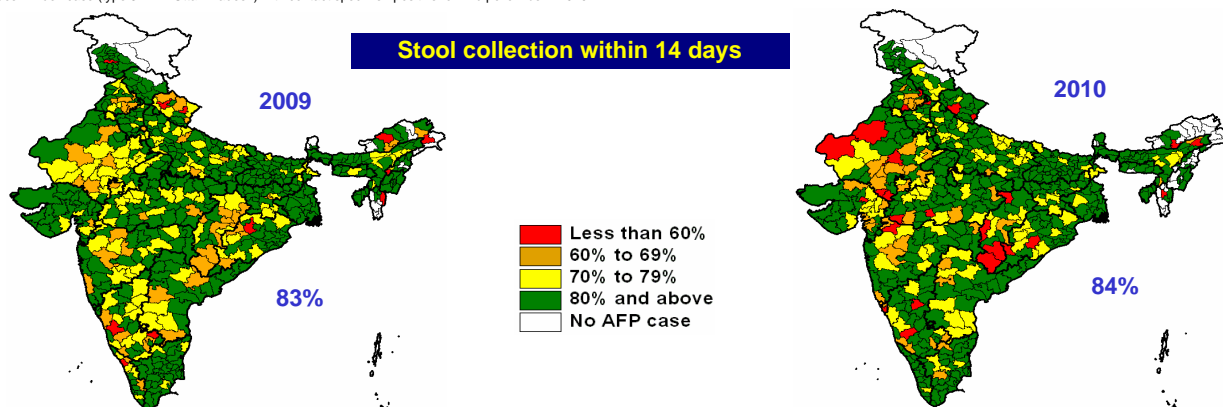


Table 3: Primary isolation results of AFP cases (2009 and 2010 date of onset)

Polio Laboratories	AFP cases with specimens, 2010	Laboratory results for AFP cases with specimen processed, 2010						Specimens received by lab in 2010
		Positive culture	Positive culture and NPEV	NPEV	Negative for polio & NPEV	Number of cases pending		
						<=14 days	>14 days	
BJMC, Ahmedabad	3211	281	26	553	2160	191	0	6473
NIV, Bangalore	1954	196	55	559	1020	124	0	4021
IoS, Calcutta	2854	123	14	448	2024	245	0	5752
KIPM, Chennai	3881	330	23	673	2720	132	3	7967
NCDC, Delhi	610	47	5	102	426	28	2	1255
CRI, Kasauli	602	57	3	66	460	16	0	1240
ERC, Mumbai	2350	146	9	407	1623	137	28	4770
SGPGI, Lucknow	7847	512	114	2841	3974	406	0	15809
TOTAL	23309	1692	249	5649	14407	1279	33	47287

Polio Laboratories	AFP cases with specimens, 2009	Laboratory results for AFP cases with specimen processed, 2009						Specimens received by lab in 2009
		Positive culture	Positive culture and NPEV	NPEV	Negative for polio & NPEV	Number of cases pending		
						<=14 days	>14 days	
BJMC, Ahmedabad	5078	203	23	930	3922	0	0	10346
NIV, Bangalore	3341	254	51	930	2106	0	0	6858
IoS, Calcutta	6492	126	27	1832	4507	0	0	13135
KIPM, Chennai	9280	911	57	1510	6802	0	0	19330
NCDC, Delhi	311	45	1	51	214	0	0	634
CRI, Kasauli	1318	76	7	184	1051	0	0	2726
ERC, Mumbai	5933	229	49	1586	4069	0	0	12106
SGPGI, Lucknow	17040	780	183	6665	9412	0	0	34673
TOTAL	48793	2624	398	13688	32083	0	0	99808

Table 4: Intratypic differentiation (ITD) of isolates from AFP cases (2009 and 2010 date of onset)

Polio Laboratories	Total AFP cases referred to ITD	2010																
		Wild				Vaccine				VDPV			NPEV by PCR	Non enterovirus	Negative	Result pending		
		Polio 1	Polio 2	Polio 3	Wild mix	Polio 1	Polio 2	Polio 3	Vaccine mix	Polio 1	Polio 2	Polio 3				<= 7 days	8-14 days	>14 days
ERC, Mumbai	436	6	0	3	0	113	71	134	97	0	0	0	4	0	1	7	0	0
KIPM, Chennai	352	0	0	8	0	73	97	97	70	0	2	0	0	0	0	5	0	0
NIV, Bangalore	251	0	0	1	0	75	55	73	41	0	1	0	3	1	0	1	0	0
SGPGI, Lucknow	595	0	0	5	0	142	75	256	102	0	0	0	4	7	0	4	0	0
BJMC, Ahmedabad	307	0	0	0	0	65	62	93	80	0	0	0	7	0	0	0	0	0
TOTAL	1941	6	0	17	0	468	360	653	390	0	3	0	18	8	1	17	0	0

* Does not include 1 contact case (type 3 - 1 in Uttar Pradesh) positive for wild poliovirus in 2010

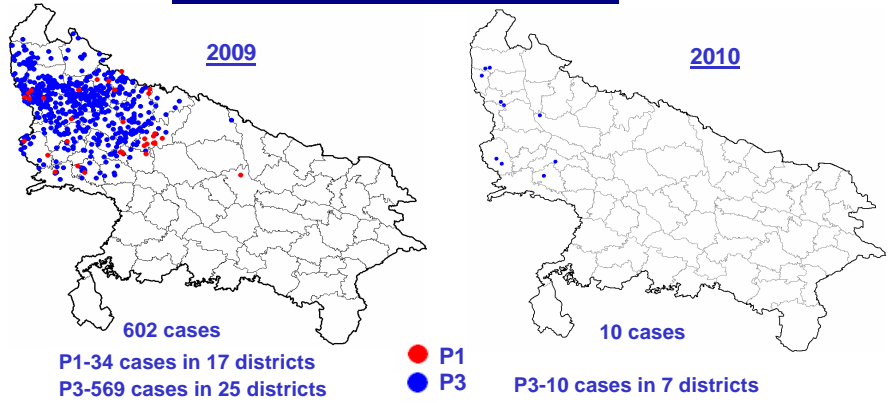
Polio Laboratories	Total AFP cases referred to ITD	2009																
		Wild				Vaccine				VDPV			NPEV by PCR	Non enterovirus	Negative	Result pending		
		Polio 1*	Polio 2	Polio 3*	Wild mix	Polio 1	Polio 2	Polio 3	Vaccine mix	Polio 1	Polio 2	Polio 3				<= 7 days	8-14 days	>14 days
ERC, Mumbai	619	13	0	21	0	241	72	160	60	2	0	0	45	2	3	0	0	0
KIPM, Chennai	966	25	0	467	1	162	90	171	37	0	11	0	0	0	2	0	0	0
NIV, Bangalore	250	4	0	49	0	96	35	39	15	0	5	0	7	0	0	0	0	0
SGPGI, Lucknow	962	34	0	81	0	381	210	158	72	0	3	0	21	2	0	0	0	0
BJMC, Ahmedabad	225	2	0	5	0	105	29	51	28	0	0	0	5	0	0	0	0	0
TOTAL	3022	78	0	623	1	985	436	579	212	2	19	0	78	4	5	0	0	0

* Does not include 39 contact cases (type 1 - 1 in Bihar; type 3 - 2 in Bihar, 36 in Uttar Pradesh) positive for wild poliovirus in 2009

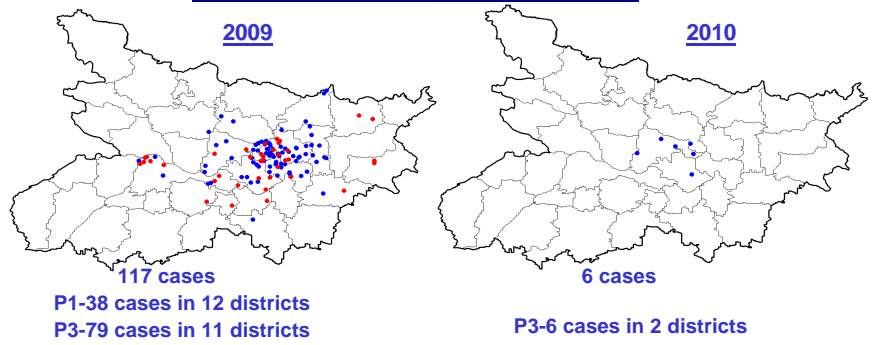
Most recent Wild Polio Virus case by State

State	Date of most recent polio case	Type
West Bengal	14-Jun-10	P3
Uttar Pradesh	21-Apr-10	P3
Jammu & Kashmir	07-Feb-10	P1
Bihar	23-Jan-10	P3
Haryana	13-Jan-10	P3
Maharashtra	10-Jan-10	P1
Jharkhand	07-Dec-09	P1
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
Orissa	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
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, UP

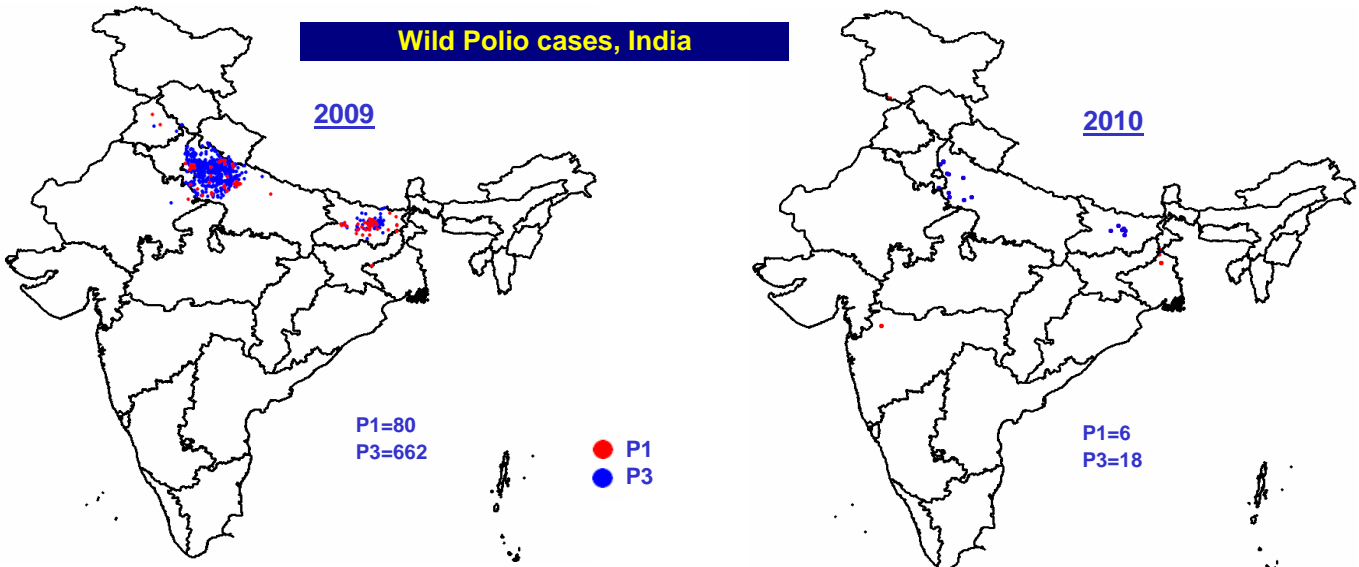


Wild Polio cases, Bihar



Month	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
January	112	36	36	7	18	51	4	10	8	24	112	14	16
February	32	22	10	1	8	16	3	5	9	14	53	5	3
March	42	11	10	3	7	9	1	1	8	14	40	16	0
April	26	8	20	3	16	7	1	2	13	14	40	13	2
May	49	39	6	4	42	5	9	2	36	32	34	24	1
June	118	69	8	13	117	7	14	6	76	30	38	79	2
July	324	142	25	30	251	25	13	3	121	64	53	89	
August	418	187	39	62	280	29	18	6	114	78	67	119	
September	283	193	32	33	334	30	18	14	137	82	49	145	
October	170	195	31	38	247	20	32	7	71	98	32	129	
November	226	155	31	43	180	16	14	7	55	203	24	60	
December	134	69	17	31	100	10	7	3	28	221	17	48	
Total	1934	1126	265	268	1600	225	134	66	676	874	559	741	24

Wild Polio cases, India



One case reported mixture of P1 and P3 wild