

# AFP Surveillance Bulletin - India

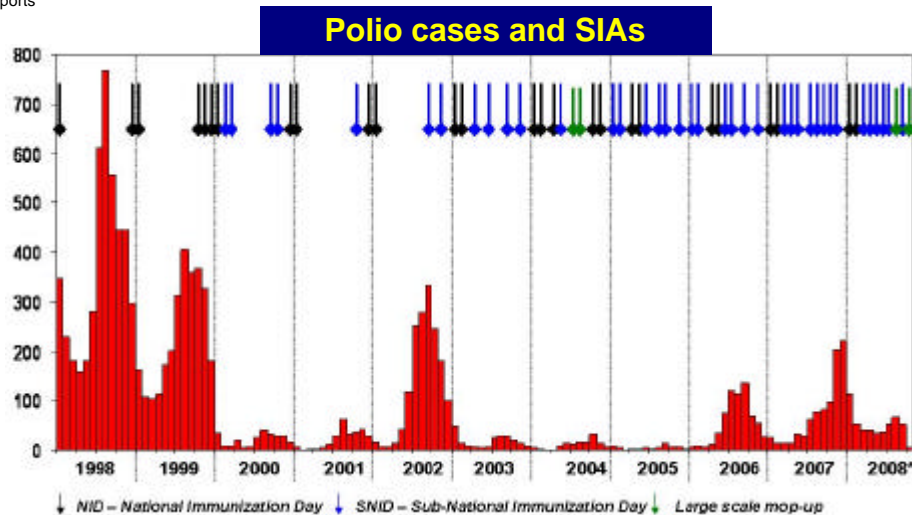
## Report for week 43, ending 25th October 2008

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

State/UT's	Total AFP cases in 2007	AFP cases as on week 43, 2007	AFP cases as on week 43, 2008	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08
Andhra Pradesh	777	617	607	69	61	43	43	53	58	73	70	64	83	72	70	21
Andaman & Nicobar	5	4	2	1	0	1	0	0	1	1	0	0	0	0	0	0
Arunachal Pradesh	39	26	38	3	6	4	2	5	6	0	0	3	4	6	8	4
Assam	536	436	404	42	35	36	39	24	42	28	48	62	63	45	44	9
Bihar	10387	7748	8741	1179	985	866	695	669	660	755	897	900	1101	1317	1301	446
Chandigarh	14	11	11	0	3	0	1	0	0	1	1	1	2	4	1	0
Chhattisgarh	482	365	403	44	36	39	41	23	29	33	36	50	63	46	67	15
D & N Haveli	3	3	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Daman & Diu	4	2	1	1	1	0	0	0	0	1	0	0	0	0	0	0
Delhi	265	207	207	13	13	27	17	17	17	24	26	18	26	33	26	3
Goa	32	28	19	2	0	2	1	2	3	1	4	1	2	3	2	0
Gujarat	844	720	601	57	48	50	57	44	57	69	63	56	74	85	76	20
Haryana	554	430	456	49	47	39	46	47	44	47	51	44	61	66	40	10
Himachal Pradesh	95	79	76	3	11	3	4	12	5	10	8	8	9	6	13	1
Jammu & Kashmir	174	152	108	11	10	5	17	14	12	14	13	11	9	7	11	0
Jharkhand	1368	1058	1212	137	124	93	81	93	85	107	137	132	166	198	159	54
Karnataka	811	587	586	78	87	79	68	57	56	67	82	73	58	56	55	14
Kerala	229	174	221	21	18	21	33	16	16	28	27	15	26	21	30	9
Lakshadweep	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	2145	1780	1722	173	141	122	120	140	130	138	233	175	212	253	246	75
Maharashtra	1881	1569	1463	156	117	106	138	124	137	110	156	154	204	188	185	67
Manipur	22	15	14	1	4	2	5	1	0	1	0	0	1	2	3	1
Meghalaya	42	34	35	2	4	2	1	0	9	5	2	8	3	5	2	0
Mizoram	14	12	7	1	1	0	4	0	0	0	2	0	1	0	0	0
Nagaland	23	20	11	4	0	2	0	1	0	0	1	1	3	2	1	2
Orissa	1023	801	874	93	69	62	46	74	68	70	70	84	115	138	151	58
Pondicherry	11	9	13	1	1	1	3	2	1	0	5	1	0	0	1	0
Punjab	371	303	324	21	19	29	30	26	31	19	41	32	52	48	36	9
Rajasthan	1336	1060	1059	120	96	72	99	93	92	123	134	96	130	145	114	33
Sikkim	6	6	5	0	0	0	0	1	0	1	0	1	1	1	0	0
Tamil Nadu	545	397	410	69	43	53	43	49	49	58	37	43	47	32	43	9
Tripura	79	62	52	8	6	7	6	7	6	2	12	5	6	4	4	0
Uttarakhand	268	217	298	20	19	19	26	23	25	27	31	21	41	47	41	16
Uttar Pradesh	14885	11640	14089	1476	1309	1023	1095	1017	1219	1177	1393	1648	1889	2157	1917	577
West Bengal	2253	1849	1482	195	164	131	133	140	155	141	158	148	192	181	180	54
<b>TOTAL</b>	<b>41524</b>	<b>32422</b>	<b>35552</b>	<b>4050</b>	<b>3478</b>	<b>2939</b>	<b>2894</b>	<b>2774</b>	<b>3013</b>	<b>3131</b>	<b>3739</b>	<b>3855</b>	<b>4644</b>	<b>5168</b>	<b>4827</b>	<b>1507</b>

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

Data from weekly case based reports



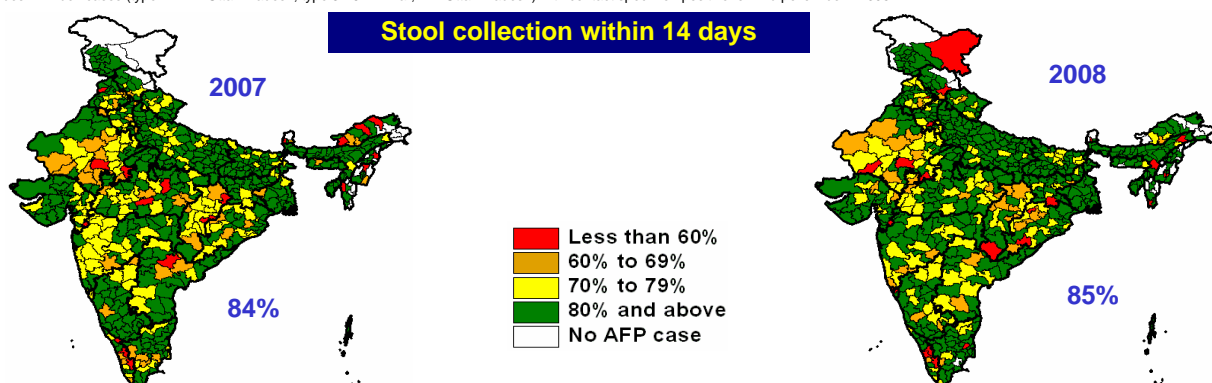
**Table 2: Classification of AFP cases and key surveillance indicators, 2007 and 2008**

State/UT's	2007										2008									
	AFP						Surveillance Indicators				AFP						Surveillance Indicators			
	AFP Cases	Case Classification				Annualized Rates		Specimen		AFP Cases	Case Classification				Annualized Rates		Specimen			
		Confirmed Polio <sup>1</sup>	Compatible	Discarded (non-polio AFP)	Pending	AFP rate	Non-polio AFP rate	% with 2 spec. w/in 14 days	% with any specimen		Confirmed Polio <sup>2</sup>	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	Total	> 90 Days															
Andhra Pradesh	777	5	5	767	0	0	2.84	2.80	82	96	607	1	0	535	71	24	2.54	2.24	85	97
Andaman & Nicobar	5	0	0	5	0	0	4.10	4.10	80	100	2	0	0	2	0	0	1.95	1.95	100	100
Arunachal Pradesh	39	0	0	39	0	0	7.85	7.85	77	97	38	0	0	25	13	3	8.98	5.90	79	97
Assam	536	0	1	535	0	0	4.50	4.49	88	98	404	1	1	349	53	23	4.03	3.48	87	96
Bihar	10387	503	161	9723	0	0	27.18	25.44	85	97	8741	226	53	7337	1125	405	26.90	22.58	85	97
Chandigarh	14	0	0	14	0	0	3.16	3.16	86	100	11	0	0	11	0	0	2.91	2.91	91	100
Chhattisgarh	482	0	2	480	0	0	5.20	5.18	72	96	403	0	0	311	92	44	5.16	3.99	74	96
D & N Haveli	3	0	0	3	0	0	2.61	2.61	100	100	1	0	0	1	0	0	1.05	1.05	100	100
Daman & Diu	4	0	0	4	0	0	4.40	4.40	100	100	1	0	0	0	1	1	1.25	0.00	0	0
Delhi	265	2	2	261	0	0	3.66	3.61	77	95	207	3	0	168	36	13	3.31	2.68	78	97
Goa	32	0	0	32	0	0	6.67	6.67	75	97	19	0	0	14	5	3	4.74	3.49	68	89
Gujarat	844	1	5	838	0	0	4.20	4.17	83	95	601	0	0	536	65	28	3.54	3.16	86	95
Haryana	554	6	10	538	0	0	5.61	5.44	77	97	456	2	1	398	55	29	5.43	4.74	84	98
Himachal Pradesh	95	0	0	95	0	0	3.61	3.61	81	100	76	0	0	68	8	3	3.43	3.07	88	99
Jammu & Kashmir	174	0	0	174	0	0	3.73	3.73	98	100	108	0	0	108	0	0	2.74	2.74	99	100
Jharkhand	1368	0	11	1357	0	0	11.10	11.01	87	98	1212	0	3	1033	176	66	11.55	9.85	84	96
Karnataka	811	1	0	810	0	0	3.56	3.55	84	97	586	0	0	508	78	50	3.78	3.28	84	97
Kerala	229	0	0	229	0	0	2.28	2.28	73	95	221	0	0	172	49	17	2.64	2.05	73	94
Lakshadweep	1	0	0	1	0	0	4.17	4.17	100	100	0	0	0	0	0	0	0.00	0.00	0	0
Madhya Pradesh	2145	0	10	2135	0	0	7.74	7.70	82	97	1722	1	4	1497	220	79	7.20	6.26	83	97
Maharashtra	1881	2	6	1873	0	0	5.05	5.03	80	97	1463	2	1	1270	190	81	4.67	4.05	84	98
Manipur	22	0	0	22	0	0	2.21	2.21	86	100	14	0	0	12	2	0	1.68	1.44	79	86
Meghalaya	42	0	0	42	0	0	3.94	3.94	93	98	35	0	0	31	4	1	3.90	3.46	89	100
Mizoram	14	0	0	14	0	0	3.80	3.80	93	100	7	0	0	5	2	1	2.10	1.50	86	100
Nagaland	23	0	0	23	0	0	2.21	2.21	91	100	11	0	0	9	2	0	1.21	0.99	100	100
Orissa	1023	1	5	1017	0	0	6.41	6.37	80	96	874	2	2	694	176	53	6.54	5.19	79	95
Pondicherry	11	0	1	10	0	0	3.44	3.13	91	100	13	0	0	13	0	0	4.81	4.81	92	100
Punjab	371	1	2	368	0	0	3.89	3.86	82	96	324	1	3	285	35	18	4.03	3.54	81	96
Rajasthan	1336	3	10	1323	0	0	5.19	5.14	75	95	1059	1	1	890	167	80	4.81	4.04	75	95
Sikkim	6	0	0	6	0	0	2.31	2.31	67	100	5	0	0	4	1	0	2.52	2.02	80	100
Tamil Nadu	545	0	1	544	0	0	3.02	3.02	83	95	410	0	0	382	28	15	2.72	2.54	88	99
Tripura	79	0	0	79	0	0	5.84	5.84	95	99	52	0	0	50	2	0	4.58	4.40	94	100
Uttarakhand	268	6	2	260	0	0	7.18	6.97	85	97	298	0	0	269	29	7	9.48	8.56	89	98
Uttar Pradesh	14885	341	201	14343	0	0	19.59	18.88	84	97	14089	254	38	12076	1721	568	21.92	18.79	86	97
West Bengal	2253	2	12	2239	0	0	7.52	7.47	87	97	1482	2	1	1348	131	37	5.87	5.34	87	97
<b>TOTAL</b>	<b>41524</b>	<b>874</b>	<b>447</b>	<b>40203</b>	<b>0</b>	<b>0</b>	<b>9.71</b>	<b>9.40</b>	<b>84</b>	<b>97</b>	<b>35552</b>	<b>496</b>	<b>108</b>	<b>30411</b>	<b>4537</b>	<b>1649</b>	<b>9.91</b>	<b>8.47</b>	<b>85</b>	<b>97</b>

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

<sup>1</sup> Includes 35 index cases (type 1 - 1 in Bihar, 2 in UP, 1 in Maharashtra; type 3 - 13 in UP, 15 in Bihar, 1 in Delhi, 1 in Uttarakhand; type P1+P3 Mix - 1 in Bihar) with contact specimen positive for wild poliovirus in 2007

<sup>2</sup> Includes 12 index cases (type 1 - 2 in Uttar Pradesh; type 3 - 6 in Bihar, 4 in Uttar Pradesh) with contact specimen positive for wild poliovirus in 2008



**Table 3: Primary isolation results of AFP cases (2007 and 2008 date of onset)**

Polio Laboratories	AFP cases with specimens, 2008	Laboratory results for AFP cases with specimen processed, 2008						Specimens received by lab in 2008
		New algorithm						
		Positive culture	Positive culture and NPEV	NPEV	Negative for polio & NPEV	Number of cases pending		
						<=14 days	>14 days	
BJMC, Ahmedabad	2626	150	19	547	1819	91	0	5235
NIV, Bangalore	2294	139	53	768	1247	87	0	4596
IoS, Calcutta	4264	102	11	1019	3045	48	39	8520
KIPM, Chennai	6663	318	32	1244	4993	76	0	13315
CRI, Kasauli	868	33	2	152	669	12	0	1747
ERC, Mumbai	4449	179	52	1731	2270	172	45	8920
SGPGI, Lucknow	12694	716	101	4262	7245	370	0	25314
<b>TOTAL</b>	<b>33858</b>	<b>1637</b>	<b>270</b>	<b>9723</b>	<b>21288</b>	<b>856</b>	<b>84</b>	<b>67647</b>

Polio Laboratories	AFP cases with specimens, 2007	Laboratory results for AFP cases with specimen processed, 2007											Specimens received by lab in 2007	
		Old algorithm						New algorithm			Negative for polio & NPEV	Number of cases pending		
		P1	P2	P3	Polio mix	NPEV	Positive culture	Positive culture and NPEV	NPEV	<=28 days		> 28 days		
BJMC, Ahmedabad	4737	57	14	46	38	287	93	10	599	3593	0	0	9554	
NIV, Bangalore	1810	2	3	2	9	60	146	4	430	1154	0	0	3619	
IoS, Calcutta	5228	16	11	19	7	224	97	0	736	4118	0	0	10465	
KIPM, Chennai	8458	84	16	53	13	333	570	0	1224	6165	0	0	16929	
PII, Coonoor	140	0	0	0	0	7	0	0	8	125	0	0	279	
CRI, Kasauli	1123	15	3	7	1	114	42	0	189	752	0	0	2251	
ERC, Mumbai	2621	0	0	0	0	0	111	0	1099	1411	0	0	5284	
SGPGI, Lucknow	16145	187	31	31	19	1157	929	0	3240	10551	0	0	32233	
<b>TOTAL</b>	<b>40262</b>	<b>361</b>	<b>78</b>	<b>158</b>	<b>87</b>	<b>2182</b>	<b>1988</b>	<b>14</b>	<b>7525</b>	<b>27869</b>	<b>0</b>	<b>0</b>	<b>80614</b>	

**Table 4: Intratypic differentiation (ITD) of isolates from AFP cases (2007 and 2008 date of onset)**

Polio Laboratories	Total AFP cases referred to ITD	2008												
		Wild				Vaccine				NPEV by PCR	Non enterovirus	Result pending		
		Polio 1	Polio 2	Polio 3 *	Wild mix	Polio 1	Polio 2	Polio 3	Vaccine mix			<= 7 days	8-14 days	>14 days
ERC, Mumbai	645	33	0	80	0	231	53	119	68	46	9	3	1	2
KIPM, Chennai	349	22	0	67	0	115	22	110	13	0	0	0	0	0
SGPGI, Lucknow	815	2	0	254	0	256	50	217	16	7	0	13	0	0
BJMC, Ahmedabad	98	0	0	26	0	43	3	16	9	1	0	0	0	0
<b>TOTAL</b>	<b>1907</b>	<b>57</b>	<b>0</b>	<b>427</b>	<b>0</b>	<b>645</b>	<b>128</b>	<b>462</b>	<b>106</b>	<b>54</b>	<b>9</b>	<b>16</b>	<b>1</b>	<b>2</b>

\* Does not include 12 contact cases (type 1 - 2 in Uttar Pradesh; type 3 - 6 in Bihar, 4 in Uttar Pradesh) positive for wild poliovirus in 2008

Polio Laboratories	Total AFP cases referred to ITD	2007												
		Wild				Vaccine				NPEV by PCR	Non enterovirus	Result pending		
		Polio 1 *	Polio 2	Polio 3 *	Wild mix *	Polio 1	Polio 2	Polio 3	Vaccine mix			<= 7 days	8-14 days	>14 days
ERC, Mumbai	753	9	0	110	0	228	56	170	96	75	9	0	0	0
KIPM, Chennai	737	8	0	233	1	188	55	192	55	5	0	0	0	0
SGPGI, Lucknow	1196	59	0	417	1	365	45	280	27	2	0	0	0	0
<b>TOTAL</b>	<b>2686</b>	<b>76</b>	<b>0</b>	<b>760</b>	<b>2</b>	<b>781</b>	<b>156</b>	<b>642</b>	<b>178</b>	<b>82</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>

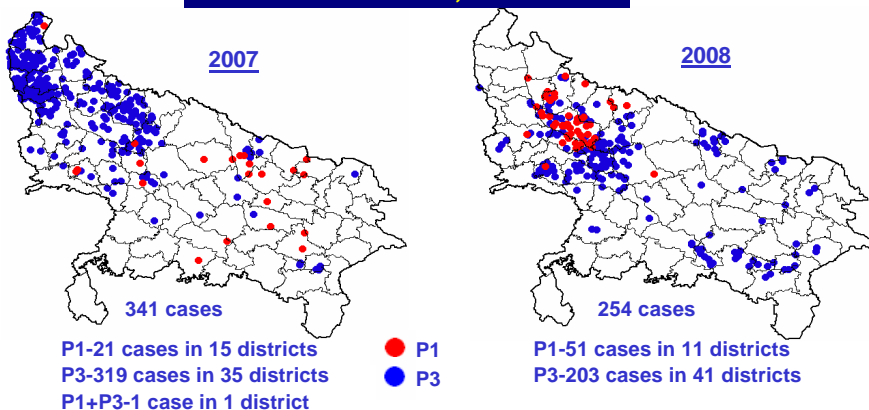
\* Does not include 1 P3 wild poliovirus reported from NIH Nathaburi Thailand laboratory and 35 contact cases (type 1 - 1 in Bihar, 2 in UP, 1 in Maharashtra; type 3 - 13 in UP, 15 in Bihar, 1 in Delhi, 1 in Uttarakhand;

type P1+P3 Mix - 1 in Bihar) positive for wild poliovirus in 2007

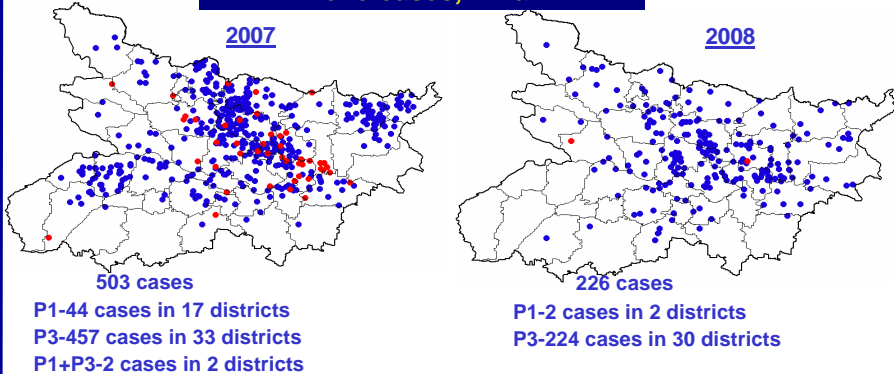
**Last polio case by State**

State	Date of last polio case	Type
Uttar Pradesh	08-Oct-08	P3
Bihar	26-Sep-08	P3
Delhi	16-Sep-08	P1
Punjab	20-Aug-08	P1
Madhya Pradesh	04-Aug-08	P3
Orissa	22-Jul-08	P3
Andhra Pradesh	16-Jul-08	P3
Haryana	14-Jul-08	P3
Assam	09-Jun-08	P1
West Bengal	21-May-08	P3
Maharashtra	26-Apr-08	P3
Rajasthan	23-Mar-08	P3
Karnataka	03-Nov-07	P3
Uttaranchal	30-Oct-07	P3
Gujarat	16-Mar-07	P1
Jammu & Kashmir	17-Nov-06	P1
Himachal Pradesh	24-Oct-06	P1
Chandigarh	02-Aug-06	P1
Jharkhand	07-May-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	

**Polio cases, UP**

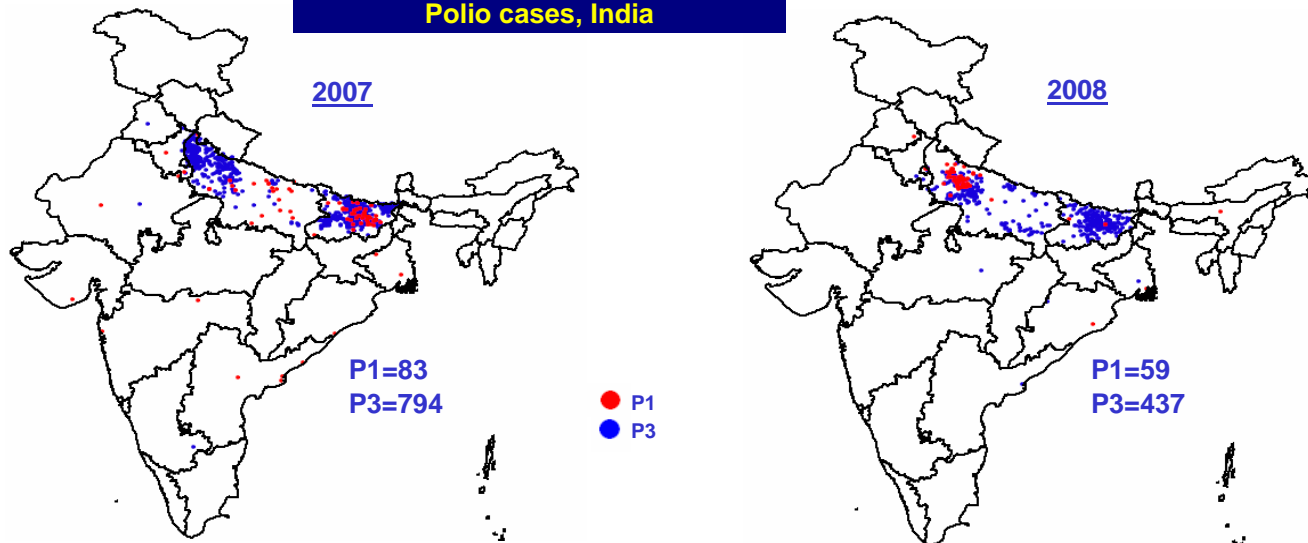


**Polio cases, Bihar**



Month	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
January	112	36	36	7	18	51	4	10	8	24	112
February	32	22	10	1	8	16	3	5	9	14	53
March	42	11	10	3	7	9	1	1	8	14	40
April	26	8	20	3	16	7	1	2	13	14	40
May	49	39	6	4	42	5	9	2	36	32	34
June	118	69	8	13	117	7	14	6	76	30	38
July	324	142	25	30	251	25	13	3	121	64	53
August	418	187	39	62	280	29	18	6	114	78	67
September	283	193	32	33	334	30	18	14	137	82	53
October	170	195	31	38	247	20	32	7	71	98	6
November	226	155	31	43	180	16	14	7	55	203	
December	134	69	17	31	100	10	7	3	28	221	
<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>496</b>

**Polio cases, India**



Three cases reported mixture of P1 and P3 wild