



**World Health
Organization**

**Weekly
AFP Surveillance Update
Pakistan**

Week 35 (*Ended on September 05, 2009*)

AFP Surveillance



***National Surveillance Cell
Federal EPI***

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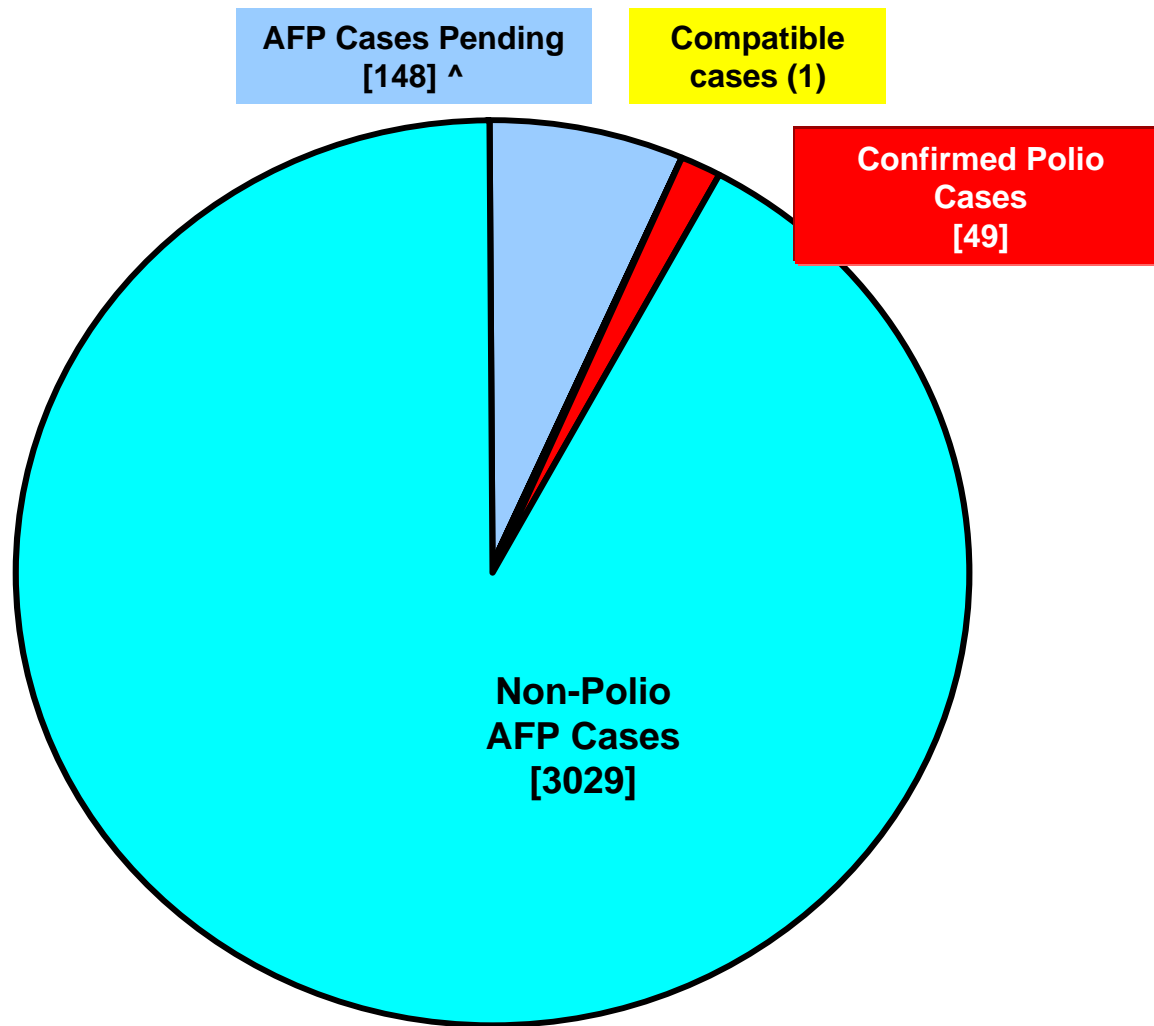
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Chart 1:AFP Case Profile 2009*



Total AFP Cases Reported in 2009 = 3227

**^34 Inadequate cases pending ERC;
59 Inadequate cases pending
55 Pending Lab**

* Afp.rec Data as of 05-09-2009

Table 1: List of Confirmed Polio Cases, Pakistan 2009* 1/3

S. NO.	PROVINCE	DISTRICT	EPID NO.	SEX	AGE (m)	DATE ONSET OF PARALYSIS	NO. OPV DOSES €		FEVER	Asymmetric Paralysis	Rapid Progression	REFUSAL	FUP	WPV TYPE	GENETICS	
							Routine	SIAs							Cluster	Sub-Cluster
1	PUNJAB	SIALKOT	PB/25/09/001	F	25	11/01/2009	1	7+	Yes	Yes	Yes	No	Y	NSL3	B1	C
2	NWFP	CHARSADA ^^*	NW/31/09/002	M	30	11/01/2009	1	7+	Yes	Yes	Yes	No	Y	NSL3	B1	C
3	FATA	MOHMAND‡	NW/35/09/001	M	12	12/01/2009	0	1	Yes	Yes	Yes	No	N	NSL1	A3	D
4	NWFP	CHARSADA ^^*	NW/31/09/005	M	32	19/01/2009	1	7+	Yes	Yes	Yes	No	Y	NSL3	B1	C
5	SINDH	KHI GADAP	SD/63/09/003	M	16	27/01/2009	0	4	Yes	No	Yes	No	Lost	NSL1	A3	A
6	PUNJAB	TT SINGH	PB/52/09/006	M	60	31/01/2009	3	7+	Yes	No	Yes	No	Y	NSL1	B4	A
7	FATA	BAJOUR‡	NW/33/09/002	F	12	29/01/2009	0	3	Yes	Yes	Yes	No	Y	NSL1	B4	A
8	SINDH	KHI BALDIA^^	SD/61/09/003	M	24	11/02/2009	0	4	Yes	Yes	Yes	No	Y	NSL3	B1	C
9	SINDH	KHI BALDIA	SD/61/09/006	F	18	25/02/2009	0	7+	Yes	Yes	Yes	No	Y	NSL3	B1	C
10	FATA	MOHMAND‡^^ ^	NW/35/09/007	F	24	12/04/2009	0	6	Yes	Yes	Yes	No	Y	NSL1	B4	A
11	SINDH	KAMBAR	SD/55/09/009	M	21	09/04/2009	1	7+	Yes	Yes	Yes	No	Y	NSL3	B1	C
12	PUNJAB	MULTAN	PB/61/09/037	M	10	21/04/2009	3	7	Yes	Yes	Yes	No	Y	NSL1	A3	D
13	PUNJAB	MULTAN	PB/61/09/043	M	8	27/04/2009	3	5	Yes	Yes	Yes	No	Y	NSL1	A3	D
14	BALUCHISTAN	KABDULAH	BN/14/09/006	M	17	03/05/2009	0	2	Yes	Yes	Yes	No	Y	NSL1	A3	A
15	FATA	BAJOUR‡	NW/33/09/017	F	8	06/05/2009	0	0	Yes	Yes	Yes	No	Y	NSL3	B1	C
16	NWFP	KOHISTAN § ^^	NW/13/09/001	F	54	23/04/2009	0	7+	No	No	Yes	No		NSL1	B4	A
17	SINDH	KHI G IQBAL	SD/65/09/011	F	30	28/04/2009	3	7+	No	No	Yes	No	Died	NSL1	A3	A
18	PUNJAB	MULTAN	PB/61/09/055	F	11	26/05/2009	3	7+	No	Yes	Yes	No	Y	NSL1	B4	A
19	SINDH	T. ALLAH YAR	SD/27/09/011	M	18	28/05/2009	3	7	Yes	Yes	Yes	No	Y	NSL1	A3	A
20	PUNJAB	RAJANPUR	PB/82/09/031	M	8	01/06/2009	1	4	No	Yes	Yes	No	Y	NSL1	A3	D

^^ Afghan Refugees

^^ Nomad

§ Contact had WPV

€ Based on recall of parents

‡ From areas having insecurity for long period.

FUP = Residual Weakness at 60days FUP

* Afp.rec Data as of 05-09-2009

Table 1.1: List of Confirmed Polio Cases, Pakistan 2009* 2/3

S.NO	PROVINCE	DISTRICT	EPID NO.	SEX	AGE (m)	DATE ONSET OF PARALYSIS	NO. OPV DOSES €		FEVER	Asymmetric Paralysis	Rapid Progression	REFUSAL	FUP	WPV TYPE	GENETICS	
							Routine	SIA's							Cluster	Sub-Cluster
21	PUNJAB	BAHAWALPUR	PB/71/09/024	F	30	13/06/2009	3	7+	No	No	Yes	No	Y	NSL1	A3	A
22	FATA	BAJOUR*	NW/33/09/026	M	23	01/07/2009	0	2	Yes	Yes	Yes	No	^	NSL3	B4	A
23	BALUCHISTAN	SHERANI	BN/26/09/002	M	3	04/07/2009	0	0	Yes	Yes	Yes	Yes	^	NSL1	A3	A
24	FATA	BAJOUR	NW/33/09/025	M	16	03/07/2009	0	7	Yes	Yes	Yes	No	^	NSL1	B4	A
25	NWFP	DIR UPPER	NW/25/09/014	M	18	28/06/2009	0	2	Yes	Yes	Yes	No	^	NSL3	B1	C
26	BALUCHISTAN	PISHIN	BN/12/09/007	M	6	13/07/2009	0	0	Yes	Yes	Yes	Yes	^	NSL1	A3	A
27	PUNJAB	LAHORE	PB/31/09/064	F	18	23/07/2009	0	0	Yes	Yes	Yes	No	^	NSL1	B4	A
28	FATA	BAJOUR *	NW/33/09/031	F	9	08/07/2009	0	0	Yes	Yes	Yes	No	^	NSL3	B1	C
29	FATA	BAJOUR *	NW/33/09/034	F	24	20/07/2009	0	0	Yes	Yes	Yes	No	^	NSL3	B1	C
30	FATA	BAJOUR	NW/33/09/035	F	14	22/07/2009	0	0	Yes	Yes	Yes	No	^	NSL3	B1	C
31	FATA	BAJOUR	NW/33/09/036	F	26	17/07/2009	0	0	Yes	Yes	Yes	No	^	NSL3	B1	C
32	SINDH	NOSHERO FERAZ	SD/45/09/024	M	54	28/07/2009	0	7+	Yes	Yes	Yes	No	^	NSL1	A3	A
33	NWFP	SWAT *	NW/24/09/014	F	10	25/07/2009	0	0	Yes	Yes	Yes	No	^	NSL1	A3	A
34	FATA	BAJOUR *	NW/33/09/032	F	18	14/07/2009	0	2	Yes	Yes	Yes	No	^	NSL3	B1	C
35	SINDH	SANGHAR	SD/32/09/034	M	11	20/07/2009	3	5	Yes	Yes	Yes	No	^	NSL1	A3	A
36	SINDH	SHIKARPUR	SD/52/09/040	F	12	02/08/2009	3	4	Yes	Yes	Yes	No	^	NSL1	A3	A
37	NWFP	SWAT *	NW/24/09/020	F	11	03/08/2009	1	0	Yes	No	Yes	No	^	NSL1		
38	NWFP	SWAT *	NW/24/09/019	F	12	01/08/2009	0	0	Yes	No	Yes	No	^	NSL1	A3	A
39	FATA	BAJOUR *	NW/33/09/042	M	20	08/08/2009	0	4	Yes	Yes	Yes	No	^	NSL3	B1	C
40	FATA	BAJOUR	NW/33/09/039	F	5	29/07/2009	0	0	Yes	Yes	UK	No	^	NSL1+ NSL3	B4 B1	A C

¥ From areas having insecurity for long period.

€ Based on recall of parents

* Afp.rec Data as of 05-09-2009

FUP = Residual Weakness at 60days FUP

^ 60 days follow up not due

UK =UNKNOWN

Table 1.2: List of Confirmed Polio Cases, Pakistan 2009* 3/3

S.NO	PROVINCE	DISTRICT	EPID NO.	SEX	AGE (m)	DATE ONSET OF PARALYSIS	NO. OPV DOSES €		FEVER	Asymmetric Paralysis	Rapid Progression	REFUSAL	FUP	WPV TYPE	GENETICS	
							Routine	SIA's							Cluster	Sub-Cluster
41	NWFP	SWAT ‡	NW/24/09/021	M	9	04/08/2009	0	0	Yes	No	No	No	^	NSL1	A3	A
42	FATA	BAJOUR	NW/33/09/041	F	24	03/08/2009	0	0	Yes	No	Yes	No	^	NSL3	B1	C
43	NWFP	SHANGLA ‡	NW/26/09/008	M	12	13/08/2009	0	0	Yes	Yes	Yes	No	^	NSL1	A3	A
44	SINDH	T.ALLAHYAR	SD/27/09/022	M	8	14/08/2009	0	0	Yes	Yes	Yes	No	^	NSL1		
45	BALUCHISTAN	KABDULAH	BN/14/09/010	M	32	13/08/2009	0	7+	Yes	UK	Yes	No	^	NSL3	B1	C
46	BALUCHISTAN	SHERANI ^^	BN/26/09/003	F	14	20/08/2009	0	3	Yes	No	Yes	UK	^	NSL1		
47	NWFP	SWAT‡	NW/24/09/029	M	12	22/08/2009	0	0	Yes	Yes	No	UK	^	NSL1		
48	FATA	WAZIR-N ‡	NW/64/09/015	M	11	23/08/2009	0	0	Yes	No	Yes	UK	^	NSL1		
49	FATA	MOHMAND	NW/35/09/017	M	14	24/08/2009	0	1	Yes	Yes	Yes	No	^	NSL3		

^^ Nomad

‡ From areas having insecurity for long period.

* Afp.rec Data as of 05-09-2009

New cases

€ Based on recall of parents

FUP = Residual Weakness at 60days FUP

^ 60 days follow up not due

UK =UNKNOWN

Table 2: LAB Update 2009*

Month of onset	Cases	Cases under process		Negative cases	NPEV positive	NPEV %	Within 14 days results	Positive cases	
		Culture	ITD					Wild	Vaccine
January	378	0	0	299	51	13%	100%	7	21
February	368	0	0	298	53	14%	100%	2	15
March	409	0	0	318	63	15%	100%	0	28
April	405	0	0	305	87	21%	100%	5 ❑	8
May	445	0	0	339	68	15%	100%	4	34
June	418	0	0	315	67	16%	100%	3	33
July	451	3 ^^	0	307	102	23%	99%	14	25
August	453	161	6	184	72	16%	63%	13	17
September	3	3	0	0	0	0%	0%	0	0
Total AFP cases	3330	167	6	2365	563	17%	95%	48 ❑	181

❑ 1 confirmed case whose contact had wild poliovirus isolation and index case did not have wild poliovirus isolation is not shown in the above table. Total wild poliovirus cases in 2009 to date are 49.

* LAB.rec Data as of 07-09-2009

^^ Notified late

Table 3: Urgent Pending Cases 2009*

S. N o.	DISTRICT	TEHSIL	EPID	DONSET	AGE	SEX	DOS ES	DLOPV	Urgent by Field	¥ NSC Criteria	LAB NO.	Date of first stool collection	Date of Inoculation	Culture-update
1	BAJOUR	KHAR	NW/33/09/046	24/08/2009	36	F	7+	21/07/2009	Y	N	4093	26/08/2009	31/08/2009	UP
2	JHANG	JHANG	PB/53/09/037	17/08/2009	7	F	3	28/05/2009	Y	Y	4116	27/08/2009	02/09/2009	UP
3	KASUR	PATOKI	PB/32/09/043	28/08/2009	16	F	2	UK	Y	Y	4207	02/09/2009	05/09/2009	UP
4	OKARA	DEPALPUR	PB/34/09/053	20/08/2009	24	F	6	22/07/2009	N	Y	4099	27/08/2009	31/08/2009	UP
5	RAJANPUR	ROJHAN	PB/82/09/049	21/08/2009	8	M	4	19/08/2009	N	Y	4084	25/08/2009	29/08/2009	UP
6	LARKANA	RATODERO	SD/51/09/025	29/08/2009	36	M	6	18/08/2009	Y	Y	4214	01/09/2009	05/09/2009	UP

€ Based on recall of parents

¥ Fever, Rapid Progression, Age < 48months & Doses < 7

* Data as of 05-09-2009

UK = Unknown

UP = Under process

Urgent on both criteria

Table 4: List of samples from AFP Cases pending for ITD*

S. No.	DISTRICT	TEHSIL	EPID	DONSET	AGE (m)	SEX	DOSSES	DLOPV	Urgent by Field	¥ NSC Criteria	LAB NO.	Date of first stool collection	Inoculation date	PCR Results	ELISA Results
1	TANK	TANK	NW/63/09/007	18/08/2009	31	F	7+	17/08/2009	N	N	4025	23/08/2009	27/08/2009	SL1 ^^	NSL1^^
2	DIR LOWER	TIMARGARA	NW/23/09/037	13/08/2009	26	M	7+	28/07/2009	N	N	4080	27/08/2009	29/08/2009	SL2, SL3	UP
3	SWAT	SWAT	NW/24/09/030	17/08/2009	9	F	0	-	N	N	4134	29/08/2009	02/09/2009	UP	UP
4	SWAT	MATTA	NW/24/09/031	17/08/2009	24	M	7+	UK	N	N	4135	28/08/2009	02/09/2009	UP	UP
5	MUZAFRGARH	ALI PUR	PB/83/09/073	18/08/2009	31	F	7+	17/08/2009	N	N	4036	24/08/2009	27/08/2009	SL1,SL3	UP
6	SAHIWAL	CHICHAWATNI	PB/65/09/046	24/08/2009	8	F	7+	20/07/2009	N	N	4081	26/08/2009	29/08/2009	SL1, SL3	UP
7	FAISALABAD	FAISALABAD	PB/51/09/079-C2	-	2	M	-	-	N	-	4138	30/08/2009	02/09/2009	UP	UP

INDEX CASE

7	FAISALABAD	FAISALABAD	PB/51/09/079	06/08/2009	57	M	7+	23/07/2009	N	N	4136	29/08/2009	02/09/2009	UP
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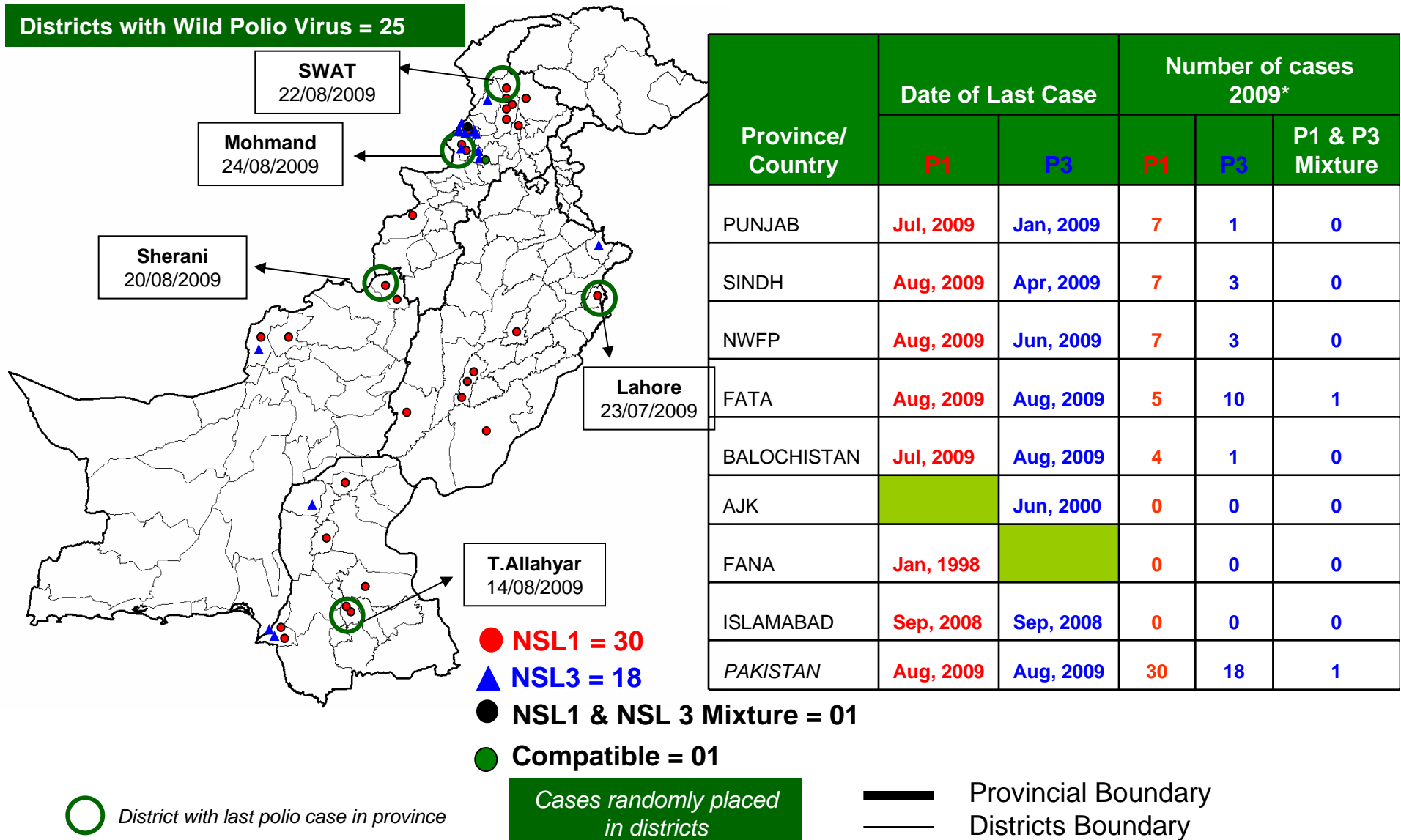
^^ P1 Discordand
SL1 on PCR & NSL1 on ELISA
Pending for Genomic Sequencing

€ Based on recall of parents

* Source : RRL dated 05/09/2009 Un-known UP = under process

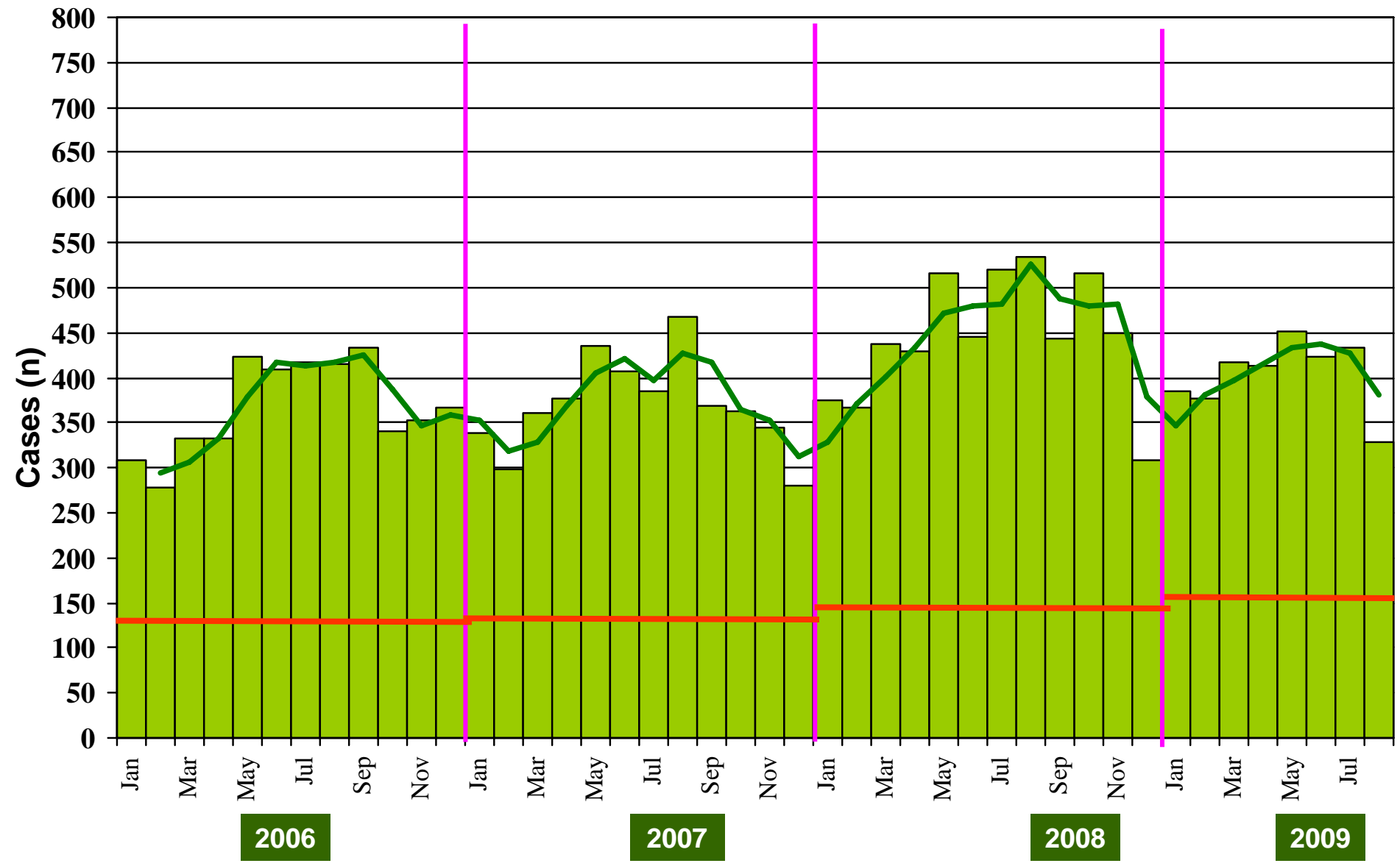
¥ Fever, Rapid Progression, Age < 48months & Doses < 7

Map1: Distribution of Wild Polio Virus cases Pakistan 2009*



* Afp.rec Data as of 05-09-2009

Graph 1: Distribution of AFP Cases by Month, Pakistan 2006-2009*



*Afp.rec Data as of 05-09-2009

Moving Centering Averages

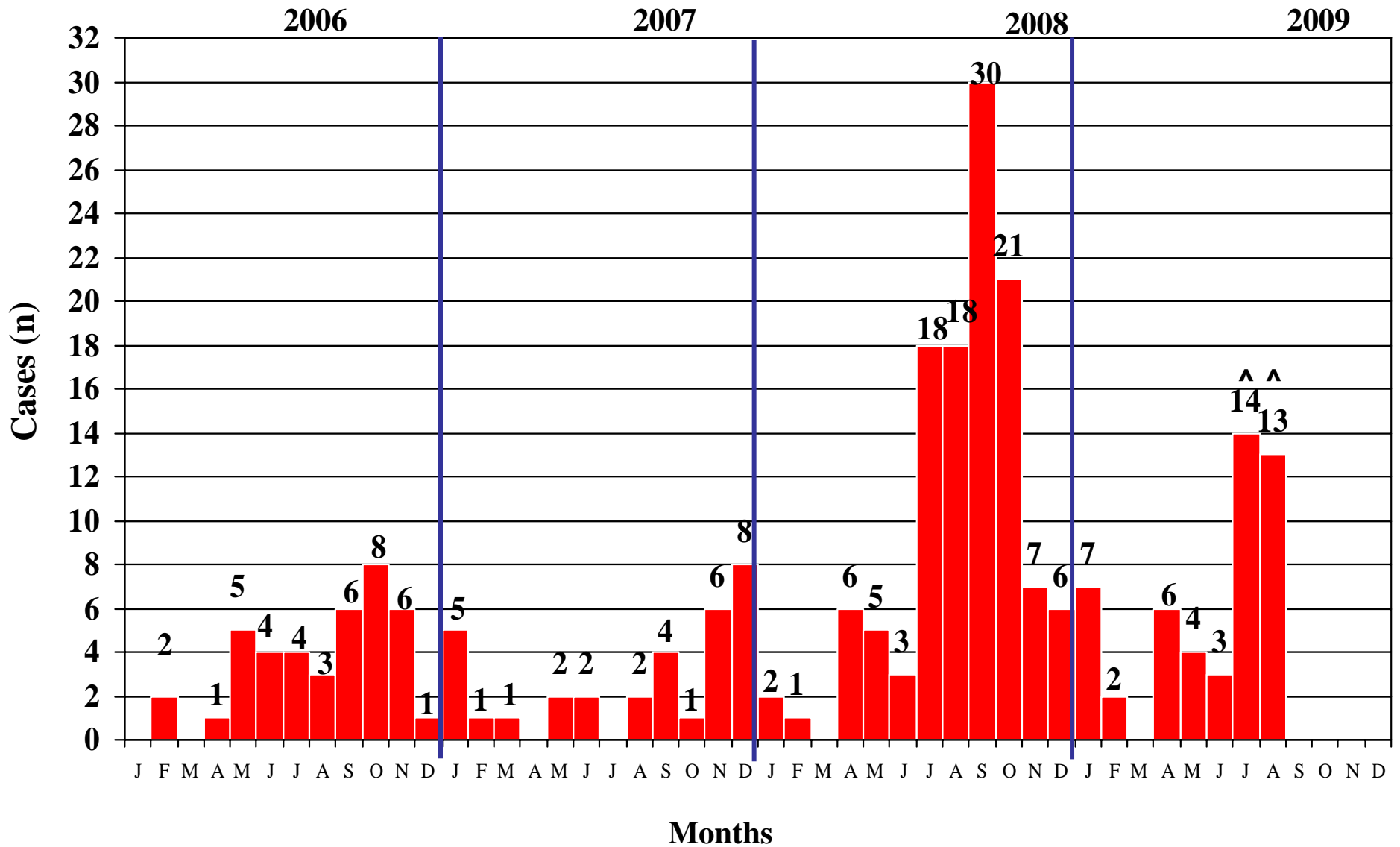
@ Non-polio AFP rate of 2/100,000 children < 15 years

**Table 5: Distribution of AFP Cases By Week of Onset [^]
Pakistan 2009* [Week number/ Ending on]**

PROVINCE	W 19 16 May 09	W 20 23 May 09	W 21 30 May 09	W 22 06 Jun 09	W 23 13 Jun 09	W 24 20 Jun 09	W 25 27 Jun 09	W 26 04 Jul 09	W 27 11 Jul 09	W 28 18 Jul 09	W 29 25 Jul 09	W 30 01 Aug 09	W 31 08 Aug 09	W 32 15 Aug 09	W 33 22 Aug 09	W 34 29 Aug 09	W 35 05 Sep 09
PUNJAB	47	46	43	50	37	37	38	46	38	51	49	46	53	48	45	39	5
SINDH	19	30	29	22	25	32	31	27	18	19	27	24	30	30	28	14	2
NWFP	13	16	20	22	16	17	21	23	25	25	22	20	22	28	25	16	4
FATA	5	3	4	0	3	2	6	3	5	6	2	4	4	5	3	4	0
BALUCHISTAN	4	5	6	7	2	3	6	6	8	4	3	9	4	4	3	1	0
AJK	2	2	1	0	0	0	0	0	3	2	1	3	1	0	2	0	0
FANA	0	1	0	0	0	0	0	1	0	0	0	0	1	1	0	2	0
ISLAMABAD	0	0	0	1	0	2	1	0	0	0	0	1	1	1	0	1	0
PAKISTAN	90	103	103	102	83	93	103	106	97	107	104	107	116	117	106	77	11

* Pak Lab.rec Data as of 05-09-2009

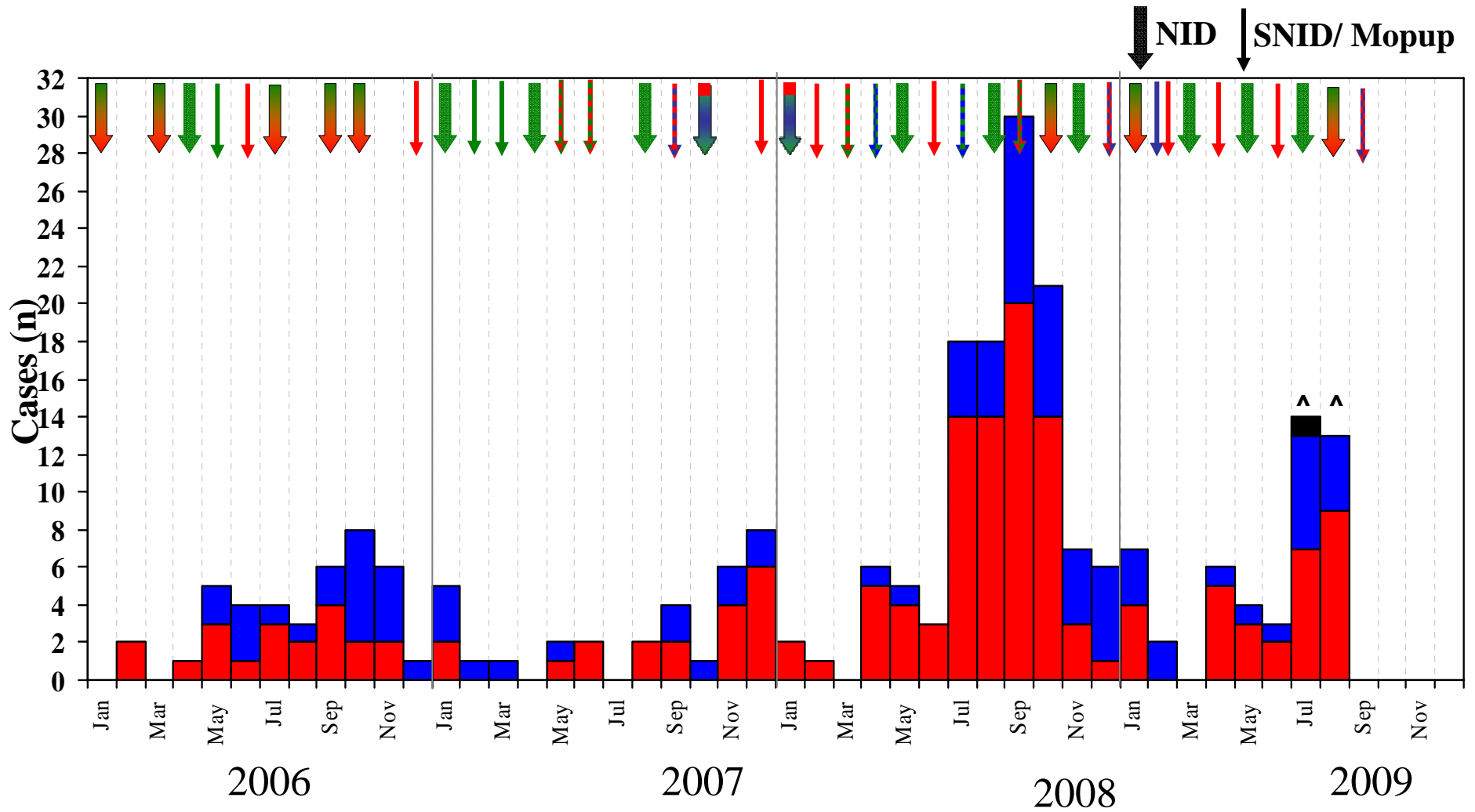
Graph 2: Wild Polio Cases By Month, 2006- 2009*



[^] Data incomplete

* Afp.rec Data as of 05-09-2009

Graph 3: Confirmed Polio Cases By Poliovirus Type, 2006-2009*



Vaccine Type

■ mOPV1 ■ mOPV3 ■ Trivalent

Months / Years

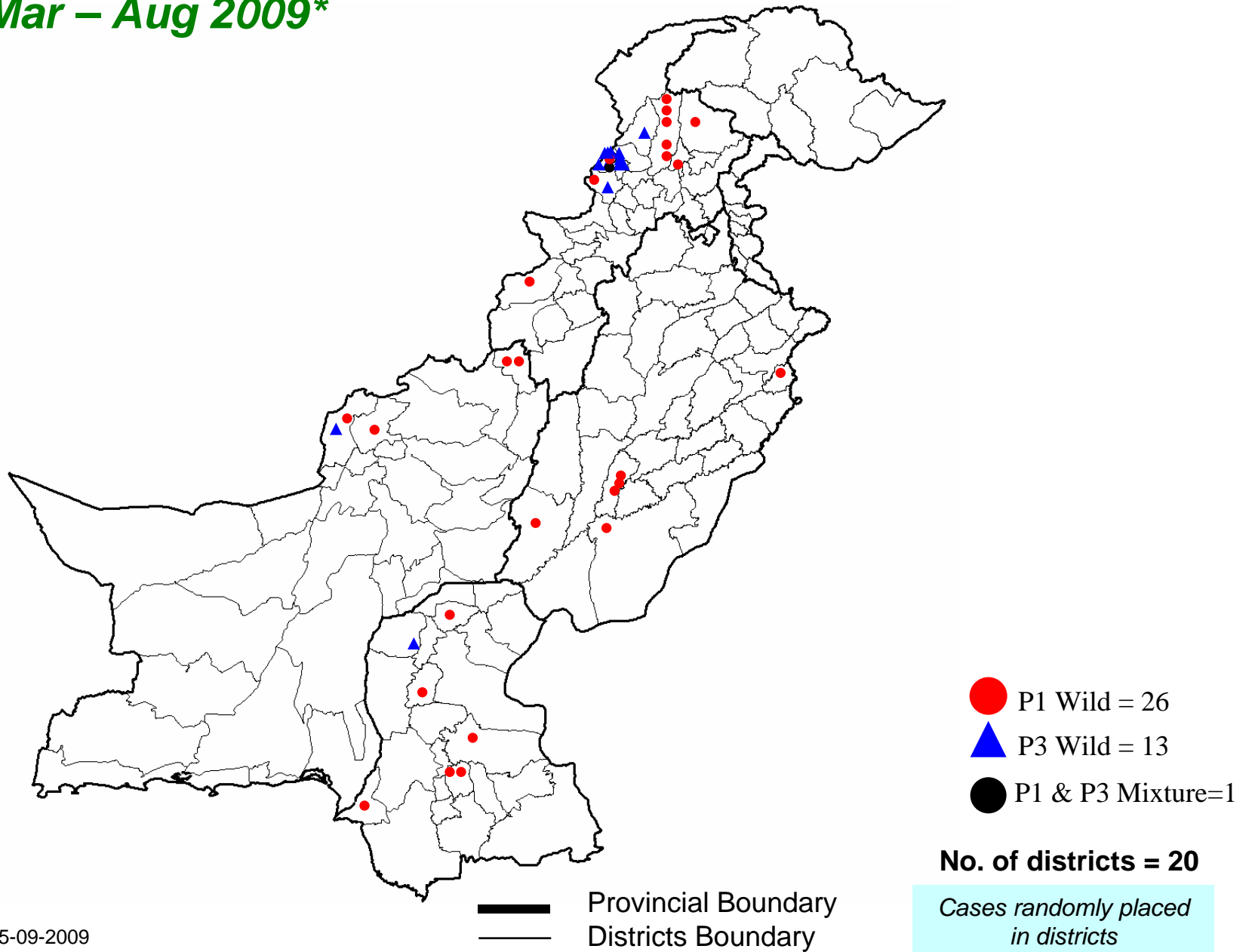
^ Data incomplete

Virus Type

■ NSL3 ■ NSL1 ■ NSL1 & NSL3

* Afp.rec Data as of 05-09-2009

Map 2: Wild Polio cases in the last 6 months Mar – Aug 2009*

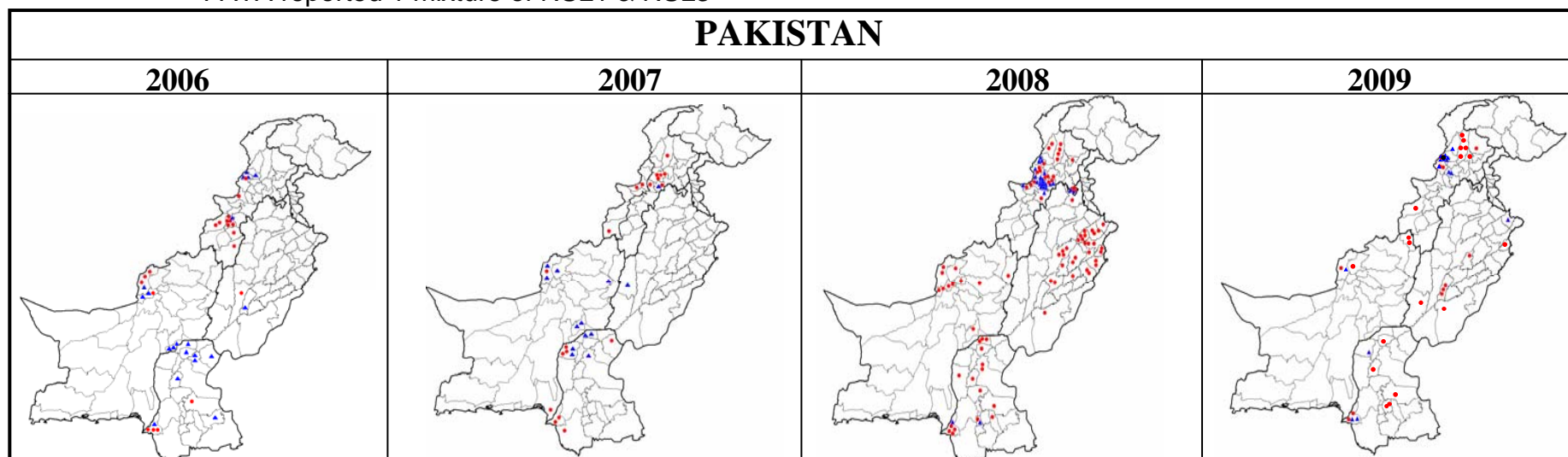


* Afp.rec Data as of 05-09-2009

Table 6: Polio Eradication Update, Pakistan 2006-2009*

Province	Polio 1				Polio 3				Total Wild			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
PUNJAB	1	0	31	7	1	1	0	1	2	1	31	8
SINDH	4	7	16	7	8	5	2	3	12	12	18	10
NWFP	7	7	15	7	2	1	23	3	9	8	38	10
FATA^	4	3	7	5	3	0	7	10	7	3	14	16^
BALUCHISTAN	4	2	11	4	6	6	0	1	10	8	11	5
AJK	0	0	0	0	0	0	0	0	0	0	0	0
FANA	0	0	0	0	0	0	0	0	0	0	0	0
ISLAMABAD	0	0	3	0	0	0	2	0	0	0	5	0
PAKISTAN	20	19	81	30	20	13	36	18	40	32	117	49

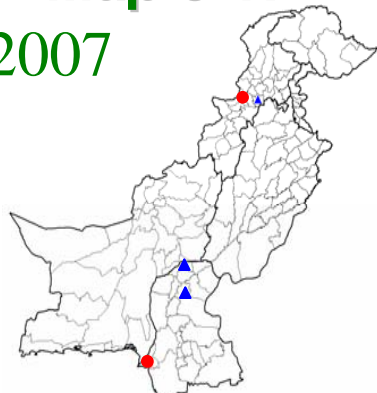
^ FATA reported 1 mixture of NSL1 & NSL3



* Afp.rec Data as of 05-09-2009

Map 3.1: Monthly Comparison of P1 & P3 Polio Cases 2007-2009*

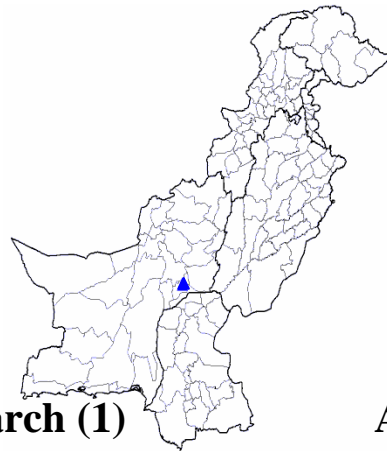
2007



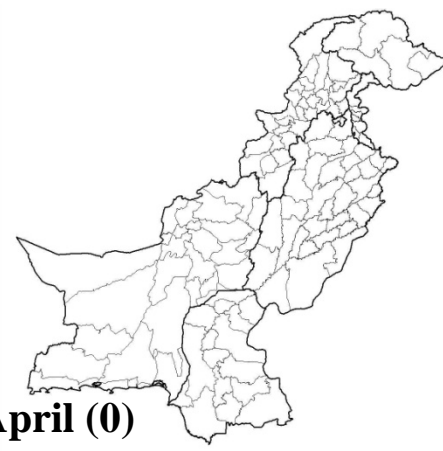
January (5)



February (1)



March (1)



April (0)

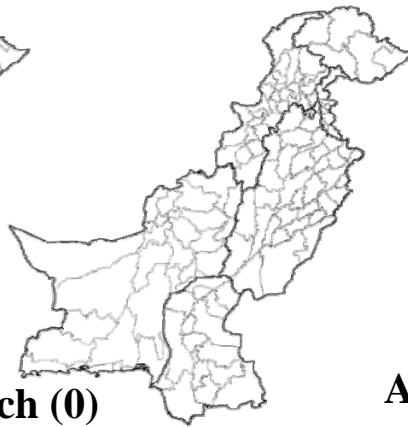
2008



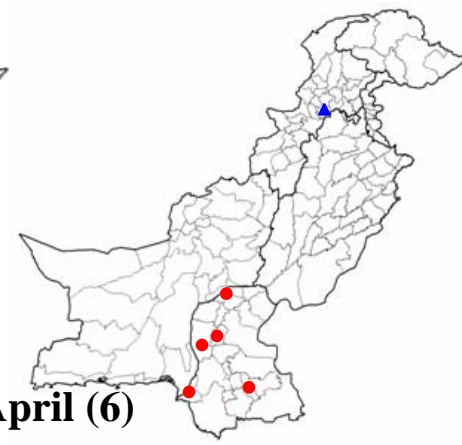
January (2)



February (1)

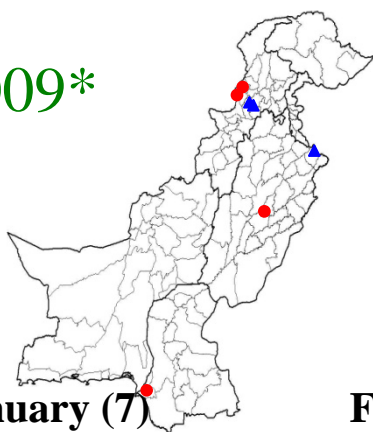


March (0)



April (6)

2009*



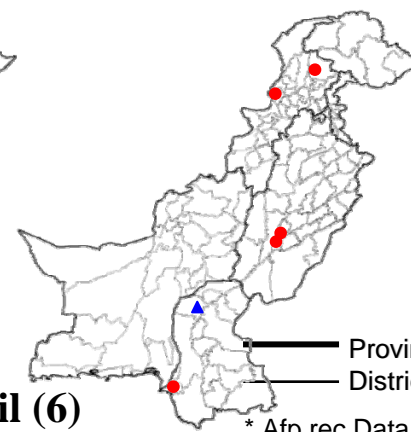
January (7)



February (2)



March (0)



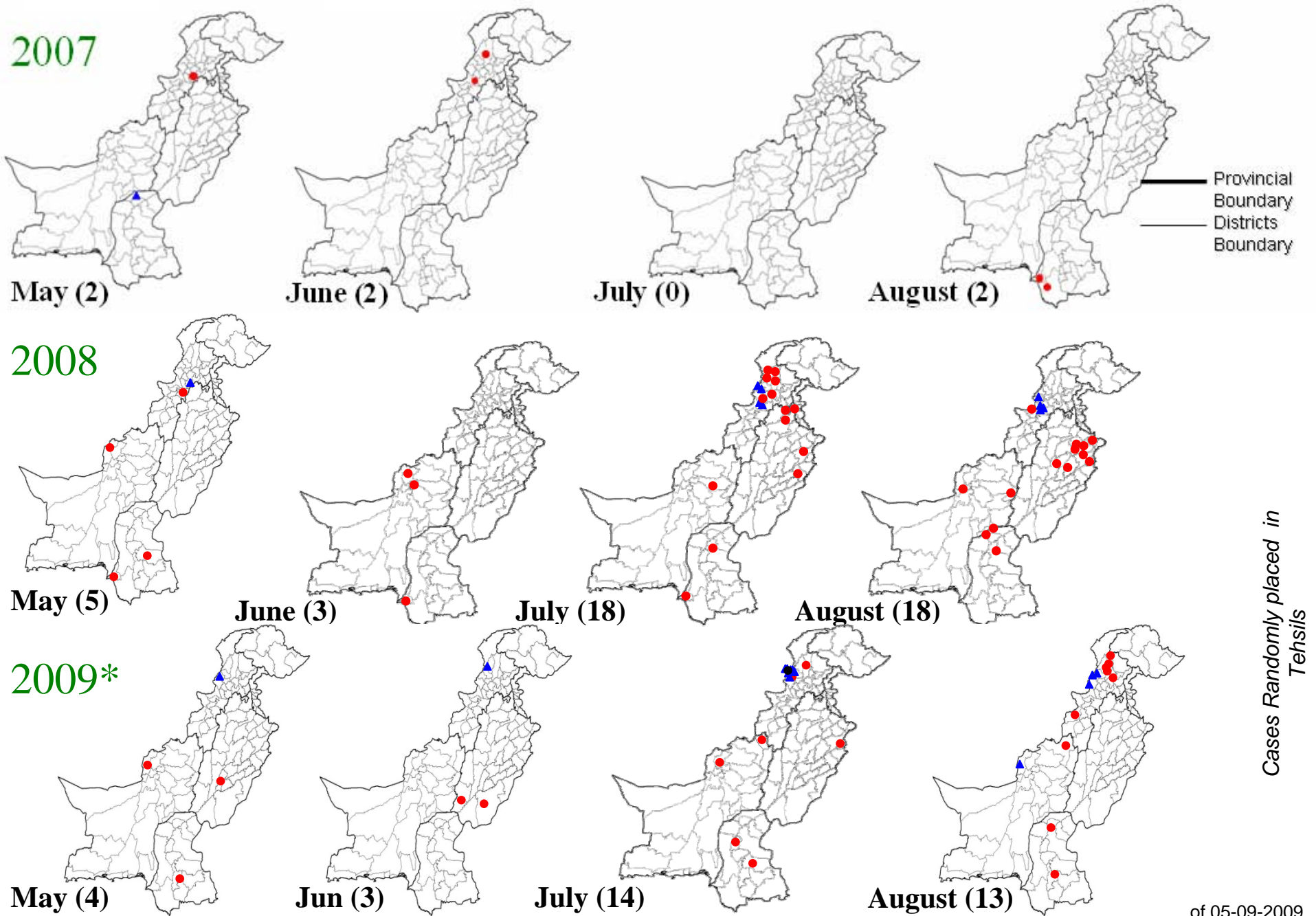
April (6)

— Provincial Boundary
— Districts Boundary

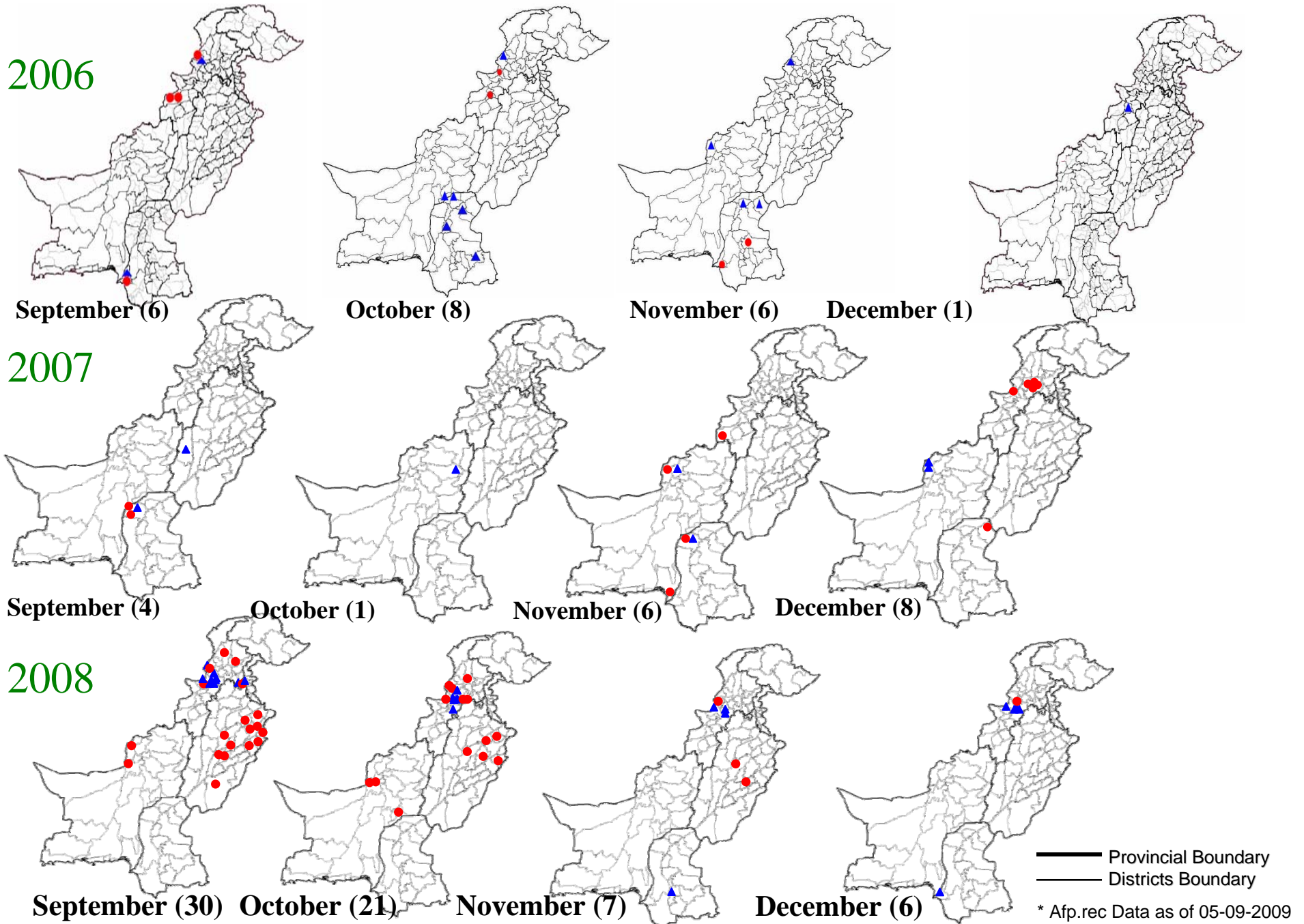
* Afp.rec Data as of 05-09-2009

Cases Randomly placed in Tehsils

Map 3.2: Monthly Comparison of P1 & P3 Polio Cases 2007-2009*

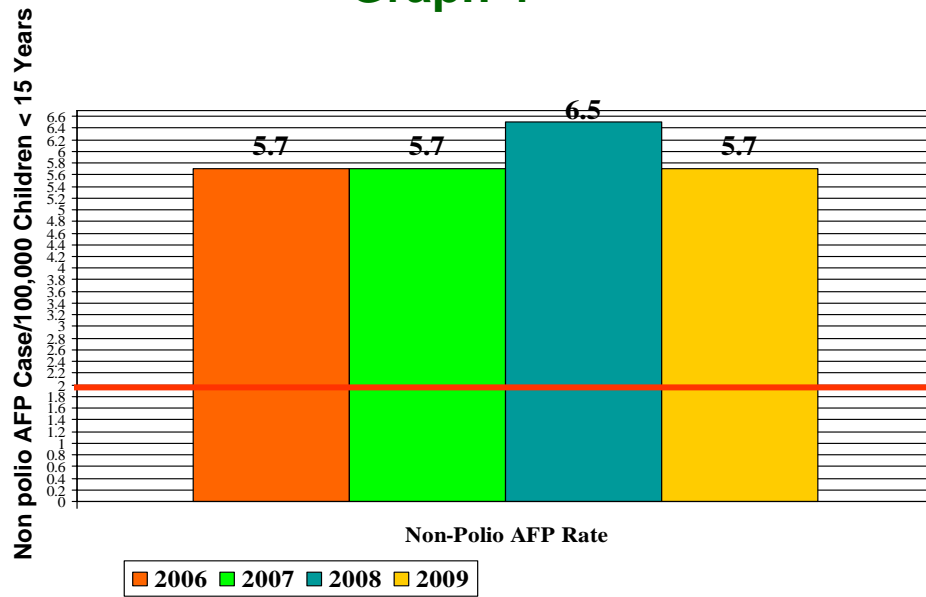


Map 3.3: Monthly Comparison of P1 & P3 Polio Cases 2006-2008*

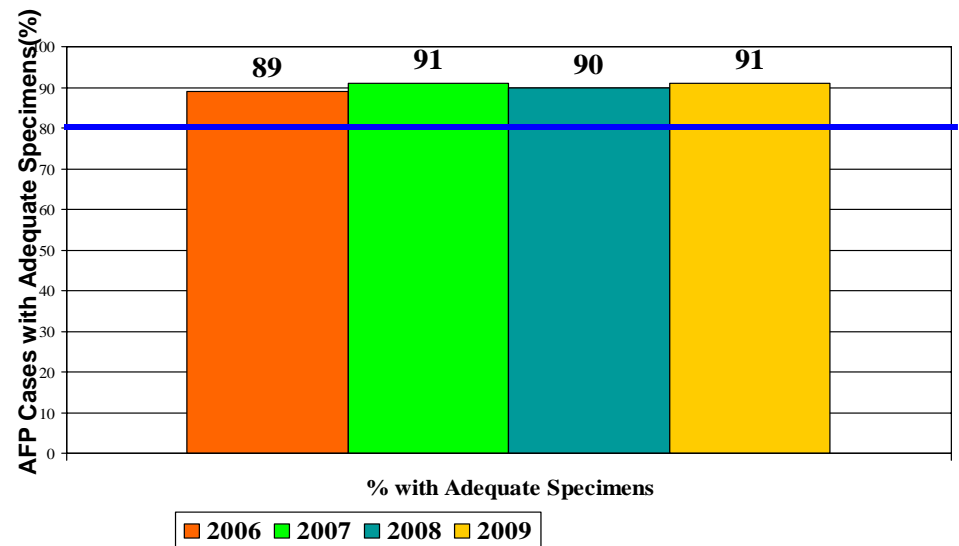


Key Surveillance Indicators 2006-2009*

Graph 4**



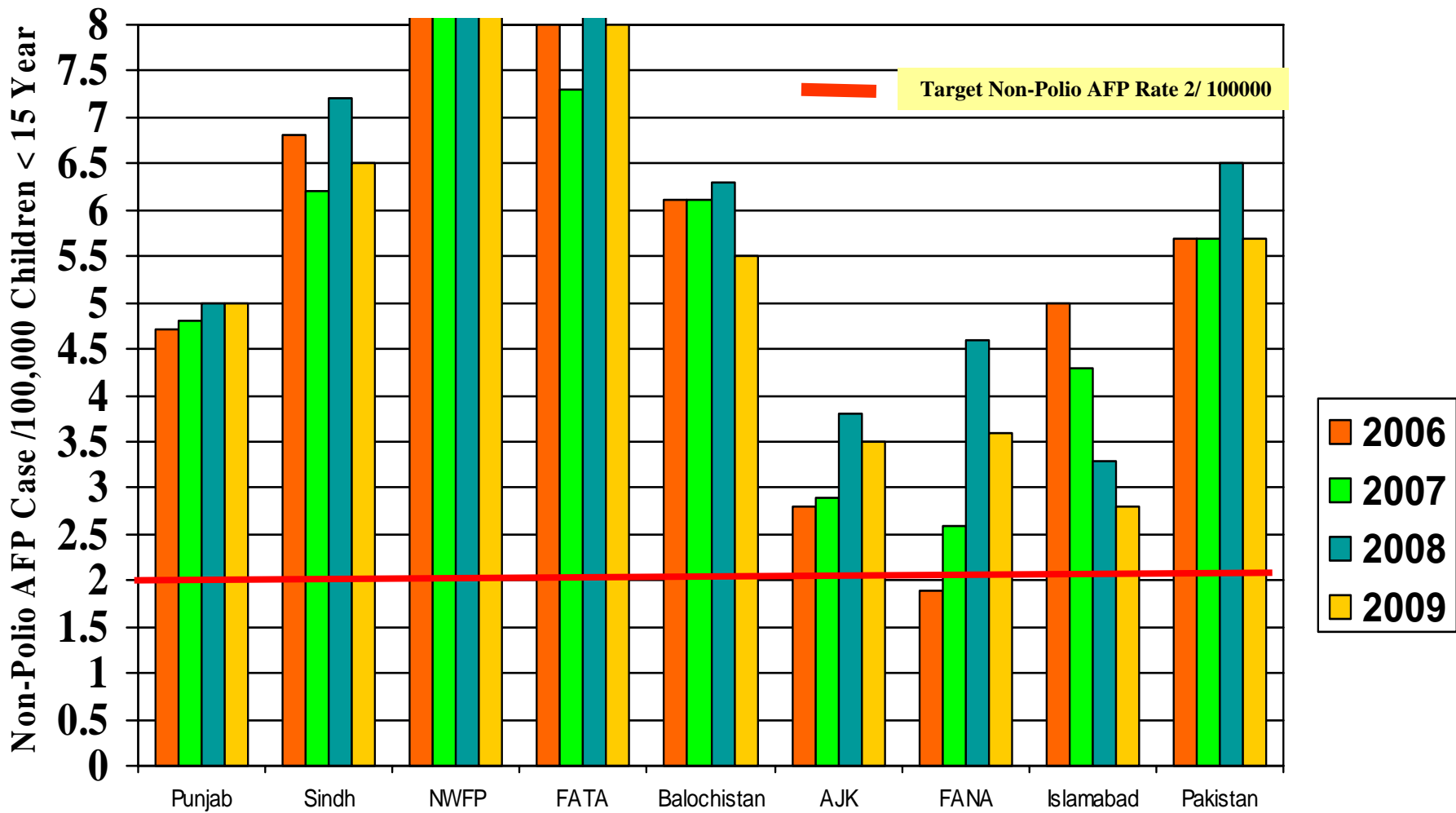
Graph 5



** Up to Week No. 34 ended on 29 August 2009

* Data as of 15-08-2009

Graph 4.1 :Non Polio AFP Rate By Province, 2006-2009*

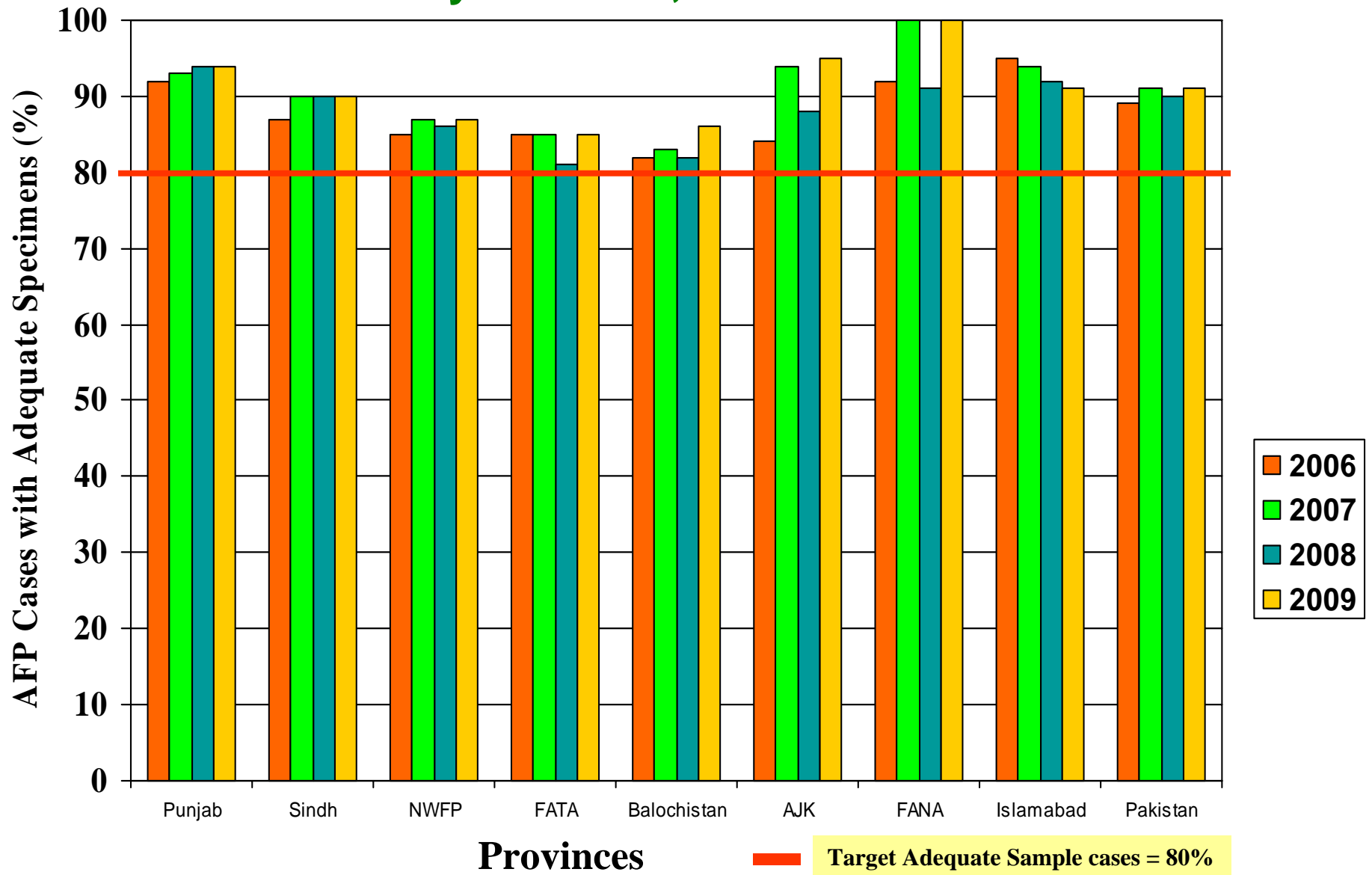


** Up to Week No. 35 ended on 29 August 2009

Provinces

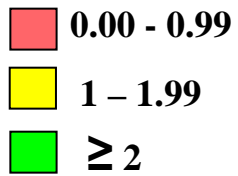
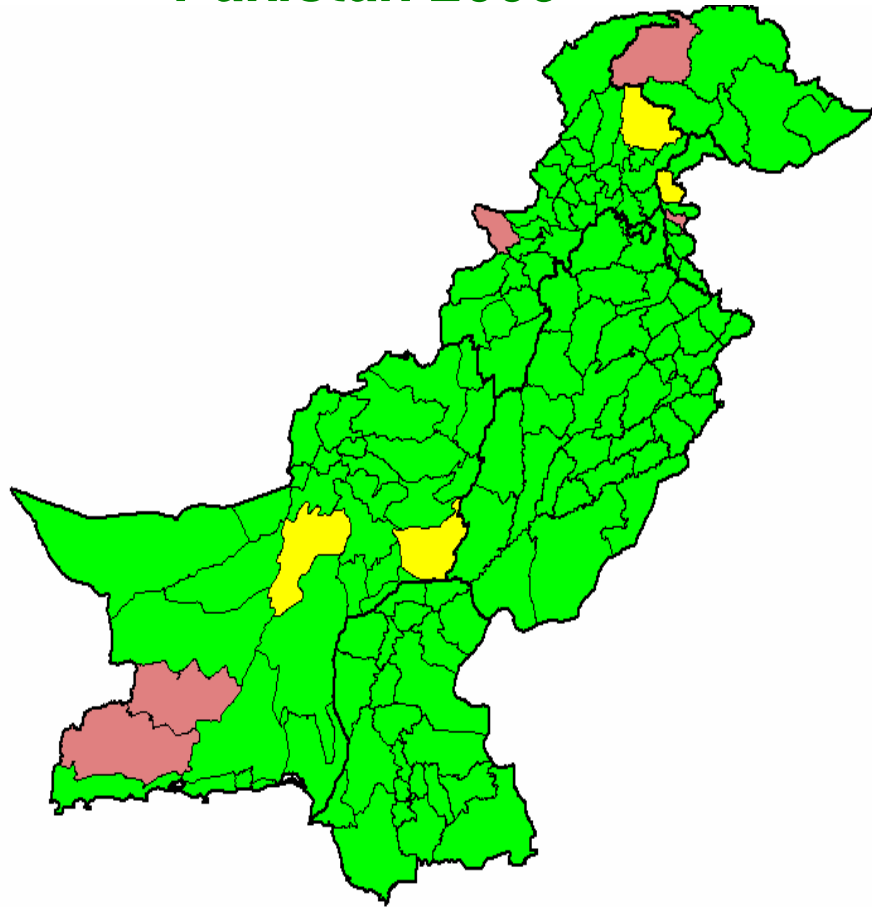
Graph 5.1: Percent AFP Cases with Adequate Specimens

By Province, 2006-2009*



Data as of 15-08-2009

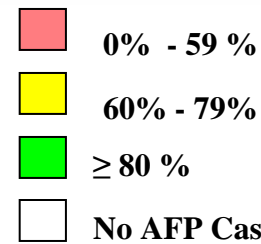
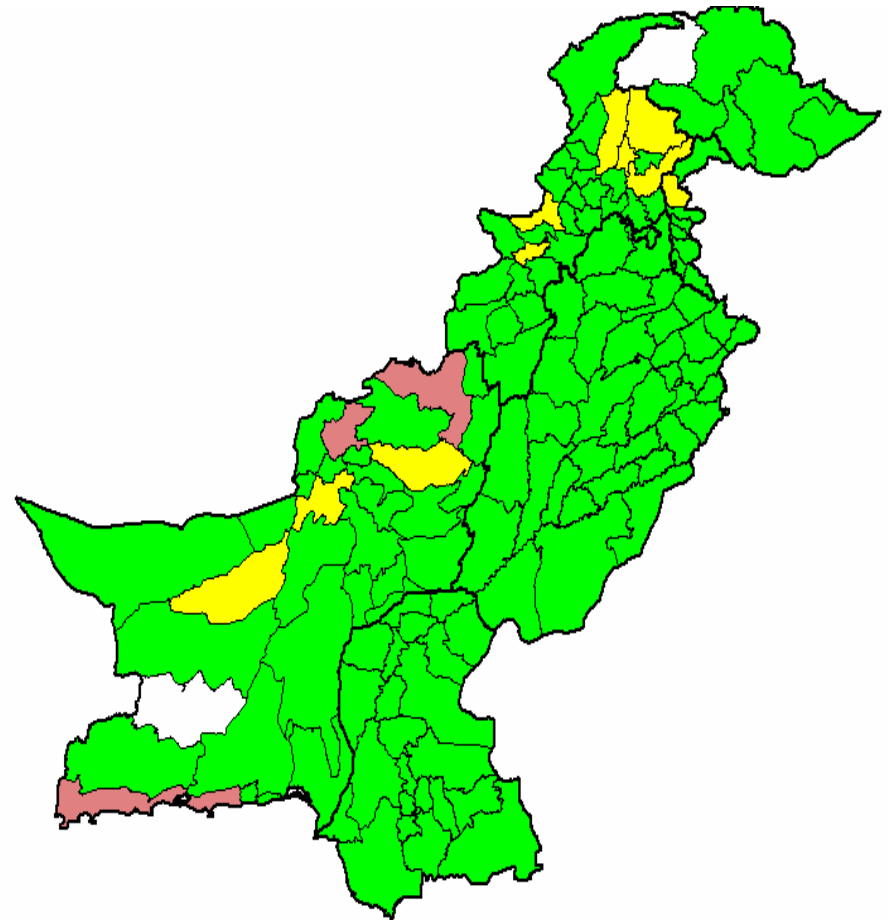
Map 4: Non-Polio AFP Rate by District, Pakistan 2009**



** Up to Week No. 34 ended on 29 August 2009

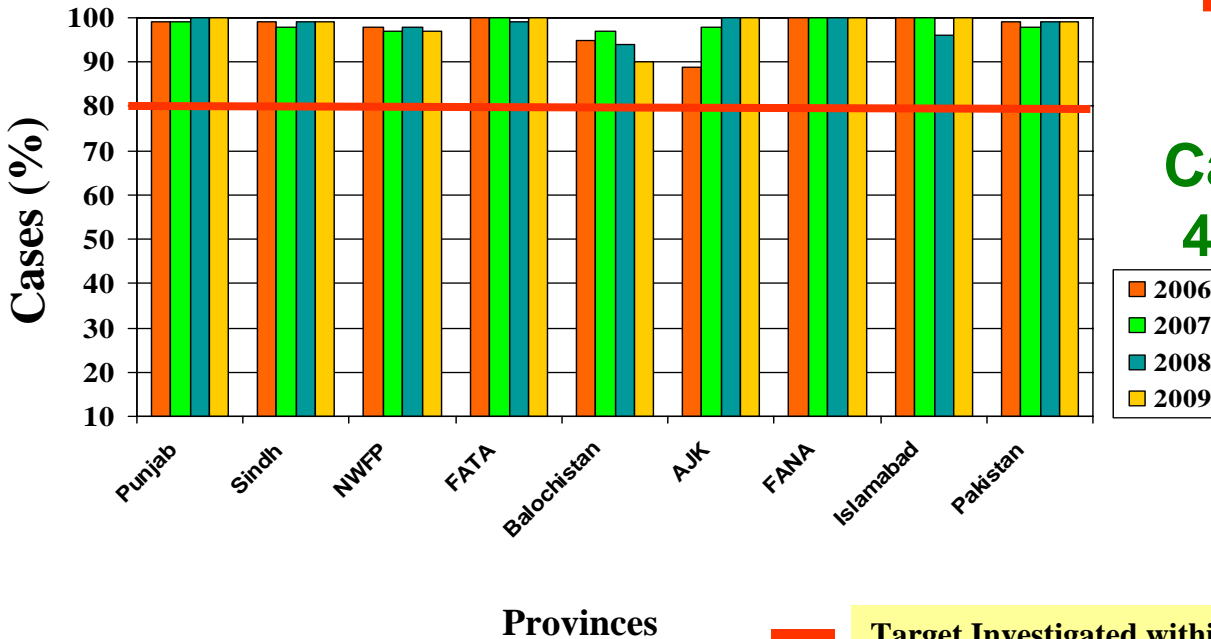
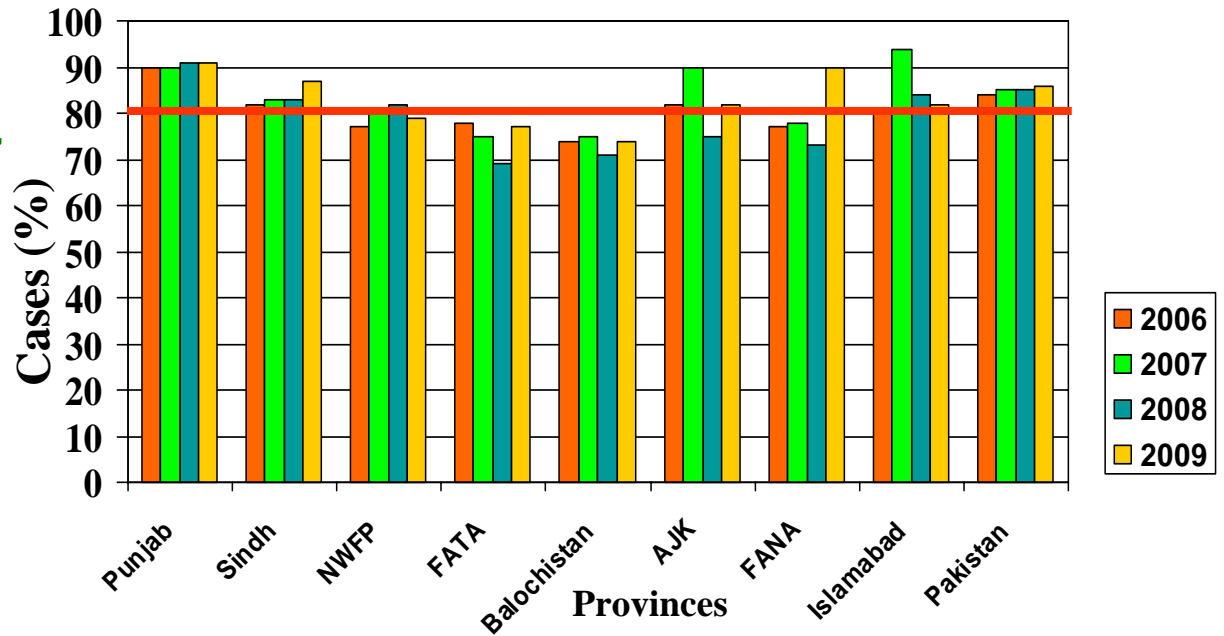
* Data as of 05-09-2009

Map 5: Percent AFP Cases with Adequate Specimens, By District – 2009*



Graph 6: Percent AFP Cases Notified within 07 days of paralysis onset

2006 ~ 2009*, By Province



Target Notified with in 7 days = 80%

Graph 7: Percent AFP Cases Investigated within 48 hours of notification 2006 ~ 2009*, By Province

Target Investigated within 48 hours = 80%

* Afp.rec Data as of 05-09-2009

Table 7: AFP CASES PENDING FOR CLASSIFICATION WITH DATE OF ONSET MORE THAN 90 DAYS*

District	Tehsil	EPID	Sex	Age	Donset	Doses	Dstool1	Dstool2	LAB	Fever	Asym	Progress	Fup	Pend
ZHOB	KAKAR KHURASAN	BN/21/09/002	M	10	30/03/2009	1	27/04/2009	28/04/2009	VACC	Y	Y	Y	LOST	159
KHARAN	KHARAN	BN/52/09/002	M	30	24/04/2009	8	24/05/2009	25/05/2009	NVI	Y	N	Y	RW	134
ICT	ICT	IB/02/09/002	F	61	08/04/2009	10	26/04/2009	28/04/2009	NVI	N	N	Y	RW	150
LAKKIMRWT	LAKKIMRWT	NW/62/09/012	M	24	02/04/2009	7	19/04/2009	20/04/2009	VACC	Y	Y	Y	RW	156
BUNIR	DAGGAR	NW/22/09/012	M	60	23/04/2009	3	.	.	.	N	N	Y	.	135
BUNIR	SOWARAI	NW/22/09/016	M	120	30/03/2009	9	01/06/2009	02/06/2009	NVI	N	N	Y	.	159
MOHMAND	PINDIALI	NW/35/09/010	M	23	15/05/2009	1	30/05/2009	.	VACC	UK	Y	Y	RW	113
SHANGLA	ALPURI	NW/26/09/004	F	132	28/05/2009	6	08/06/2009	.	NVI	Y	N	Y	.	100
PESHAWAR	PESHAWAR	NW/30/09/064	M	34	03/06/2009	23	.	.	.	N	N	Y	DIED	94
SHANGLA	ALPURI	NW/26/09/005	M	60	28/05/2009	4	13/06/2009	15/06/2009	NVI	N	N	Y	.	100
PESHAWAR	PESHAWAR	NW/30/09/067	F	93	03/06/2009	0	20/06/2009	21/06/2009	NVI	N	Y	Y	RW	94
PESHAWAR	PESHAWAR	NW/30/09/080	M	47	31/05/2009	23	23/07/2009	24/07/2009	NVI	Y	Y	Y	.	97
T.ALLAHYAR	CHAMBER	SD/27/09/023	M	15	04/06/2009	10	.	.	.	N	Y	Y	.	93

* Afp.rec Data as of 05-09-2009

FUP = Residual Weakness at 60days follow up, UK = Unknown