

Highlights of Polio Fax Bulletin No. 1049 for Week 45 2018

I. Poliovirus Transmission

1. Endemic countries (PAKISTAN & AFGHANISTAN):
 - a. Human samples: No new wild poliovirus (WPV) cases were reported this week. Total WPV1 cases for 2018 remains to date are 27 cases (19 from Afghanistan and 8 from Pakistan).
 - i. Afghanistan: The total number of WPV1 cases in Afghanistan in 2018 remains to date to be 19 from six provinces (Hilmand-3 cases, Kandhar-9 cases, Kunar-3 cases, Nangarhar-2 cases, Uruzgan-1 case and Nuristan-1 case). The most recent reported case has date of onset of paralysis on 2 October 2018.
 - ii. Pakistan: The total number of WPV1 cases in Pakistan in 2018 remains to date to be 8 from five infected districts in four provinces (Balochistan-3 cases, Khyber Pakhtunkhwa-1 case, Khyber Pakhtunkhwa Tribal District-3 case and Sindh-1 case). Date of onset of paralysis of the most recent case is 7 October 2018.
 - b. Environmental samples: Two new positive environmental samples for WPV1 reported from Pakistan this week.
 - i. Afghanistan: The total positive environmental samples from Afghanistan in 2018 remains to date to be 50 with most recent positive sample collected on 3 October 2018.
 - ii. Pakistan: Two new positive environmental samples reported this week one from Quetta district, Balochistan province and the other from a newly infected district Mardan, Khyber Pakhtunkhwa province. The total positive environmental samples from Pakistan in 2018 to date are 98 with most recent positive sample collected on 15 October 2018.

NOTE: Advance notification of five new positive environmental samples: four from Pakistan (Lahore, Quetta, Peshawar and Nowshera districts) and one from Afghanistan (Jalalabad district). These will be included in the next week's report.

II. Outbreak response countries

1. SOMALIA: no new circulating vaccine derived poliovirus (cVDPV) type-2 or type-3 from human or environmental samples.
 - a. In 2018, Somalia has reported 12 cVDPV cases so far. They include five cases of cVDPV2, six cases of cVDPV3, and one case having co-infection with cVDPV2 and cVDPV3.
 - b. cVDPV2:
 - i. The date of onset of the most recent cVDPV2 is 2 September 2018.
 - ii. In 2018 so far, VDPV2 has been isolated from 17 sewage samples in Mogadishu and date of specimen collection of recent most positive sample

is 20 September 2018. One of the above 17 samples has co-infection of cVDPV2 and cVDPV3.

- c. cVDPV3:
 - i. The date of onset of the most recent cVDPV3 is 7 September.
 - ii. No new cVDPV3 positive environmental sample was reported this week. In 2018 so far, cVDPV3 isolated from 10 sewage samples in Mogadishu and date of specimen collection of recent most positive sample is 23 August 2018. One of the above 10 samples has co-infection of cVDPV2 and cVDPV3.

III. Other countries

1. EGYPT

- a. A VDPV1 has been reported from Dakahlia province, Talkha district, onset 7 October 2018. In a tertiary care health facility, diagnosis of the case is reportedly Combined Immuno-Deficiency. The case is most likely iVDPV1; however, documentation is awaited for final classification by POL, EMR.

IV. Surveillance performance indicators

1. Nineteen of 22 member states are meeting the global target of both key surveillance indicators, namely non polio AFP rate of 2 per 100,000 children aged below 15 years and percent AFP cases with adequate specimen 80% and above.
 - a. Djibouti is missing both indicators. Djibouti, did not report any AFP case since April 2017.
 - b. Morocco has a percentage of AFP cases with adequate stool specimens of 68.5%
 - c. Oman has a percentage of AFP cases with adequate stool specimens of 73.1%
2. Yemen has the highest number of 2017 AFP cases, which are not yet finally classified (73). Also Somalia has one pending case from 2017.



AFP SURVEILLANCE

12-Nov-18

Week 45, ending 11 November 2018

Number 1049

Table 1: Acute Flaccid Paralysis (AFP) cases by week of onset

Country	Reported AFP cases by week of onset - Week (45/18) / Ending on : 11/11/2018														
	Total AFP 2016	Total AFP 2017	Total AFP to date, 2018	W34 26 Aug 18	W35 02 Sep 18	W36 09 Sep 18	W37 16 Sep 18	W38 23 Sep 18	W39 30 Sep 18	W40 07 Oct 18	W41 14 Oct 18	W42 21 Oct 18	W43 28 Oct 18	W44 04 Nov 18	W45 11 Nov 18
Afghanistan	2905	3094	2836	50	65	54	80	72	73	82	47	58	57	36	1
Bahrain	14	18	28	0	1	1	0	0	1	0	0	2	1	1	
Djibouti	3	4	0	0	0	0	0								
Egypt	1092	1242	1067	21	21	20	28	31	19	28	32	18	24	5	
Iran	776	820	721	13	13	25	15	13	23	23	17	5	6	1	
Iraq	605	699	805	14	13	20	25	21	9	17	19	16	14	11	
Jordan ****	107	116	107	0	1	4	3	1	2	1	3	1	0	1	
Kuwait	50	69	56	1	0	0	1	0	0	2	1	1	3	1	1
Lebanon ****	111	75	74	2	1	0	2	3	1	0	2	1	1	0	
Libya	70	88	108	5	5	4	3	2	4	1	1	2	2	0	0
Morocco	84	143	162	2	2	7	2	6	7	4	4	6	1		
Oman	39	40	26	0	1	1	1	1	3	1	1	1	0	1	0
Pakistan	7848	10319	9619	220	245	251	204	266	230	192	252	214	136	25	0
Palestine ****	46	43	40	0	1	1	1	1	0	1	1	1	0	0	
Qatar	9	18	9	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	273	276	165	2	6	5	3	2	5	2	3	4	2	0	
Somalia	316	345	300	7	14	10	6	10	7	10	3	6	3	1	0
Sudan	509	570	496	7	15	11	11	20	15	12	7	8	9	3	
Syria ****	303	362	295	5	4	4	9	4	5	7	12	6	4	4	
Tunisia	90	67	60	2	2	0	0	0	1	2	0	0	1	1	
U.A.E	42	58	35	1	1	0	1	0	0	1	1	0	0	0	0
Yemen	715	713	553	9	14	12	8	7	10	11	12	12	3		
Total EMR	16007	19179	17562	361	425	430	403	460	415	397	418	362	267	91	2

□ No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2016	Total year 2017	11/11		Confirmed polio cases by month of onset											
			2017	2018	December 2017	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018
Afghanistan	13	14	11	19	2	3	3	1	1	0	2	3	2	3	1	
Bahrain	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Djibouti	0	0	0	0	0	0	0	0	0	0	0	0	0			
Egypt	0	0	0	0	0	0	0	0	0	0	0	0	0			
Iran	0	0	0	0	0	0	0	0	0	0	0	0	0			
Iraq	0	0	0	0	0	0	0	0	0	0	0	0	0			
Jordan ****	0	0	0	0	0	0	0	0	0	0	0	0	0			
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0	0			
Lebanon ****	0	0	0	0	0	0	0	0	0	0	0	0	0			
Libya	0	0	0	0	0	0	0	0	0	0	0	0	0			
Morocco	0	0	0	0	0	0	0	0	0	0	0	0	0			
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0			
Pakistan	20	8	6	8	0	0	0	1	1	1	0	0	1	3	1	
Palestine ****	0	0	0	0	0	0	0	0	0	0	0	0	0			
Qatar	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0	0	0			
Somalia	0	0	0	0	0	0	0	0	0	0	0	0	0			
Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0			
Syria ****	0	0	0	0	0	0	0	0	0	0	0	0	0			
Tunisia	0	0	0	0	0	0	0	0	0	0	0	0	0			
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0	0			
Yemen	0	0	0	0												
Total EMR	33	22	17	27	2	3	3	2	2	1	2	3	3	6	2	0

**** UNRWA cases are included with those of country of residence



Table 3: Investigation of AFP cases with paralysis onset in 2017 & 2018 up to Week (45/18) / Ending on : 11/11/2018)

COUNTRY	2017												2018												Latest line List Date
	AFP									Specimen	Wild cases ****		AFP									Specimen	Wild cases ****		
	Total AFP cases onset 2017	Case classification					Non polio AFP rate **	AFP cases pending classification > 90 days from onset of paralysis	AFP cases pending classification and lab > 90 days from onset of paralysis	% with *** adequate specimens	Wild P1 Poliovirus	Wild P3 Poliovirus	Total AFP cases onset 2018	Case classification					Annualized Non polio AFP rate **	AFP cases pending classification > 90 days from onset of paralysis	AFP cases pending classification and lab > 90 days from onset of paralysis	% with *** adequate specimens	Wild P1 Poliovirus	Wild P3 Poliovirus	
		Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV								Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV							
Afghanistan	3094	14	0	0	3080	0	15.2	0	0	93.5	14	0	2836	19	0	187	2630	0	16.1	21	2	94.4	19	0	08/11/2018
Bahrain	18	0	0	0	18	0	6.2	0	0	100.0	0	0	28	0	0	10	18	0	11.2	2	0	96.4	0	0	08/11/2018
Djibouti	4	0	0	0	4	0	1.3	0	0	100.0	0	0	0	0	0	0	0	0	0.0	0	0		0	0	16/09/2018
Egypt	1242	0	0	0	1240	2	3.3	0	0	94.4	0	0	1067	0	0	69	998	1	3.2	3	0	92.6	0	0	08/11/2018
Iran	820	0	0	0	820	0	4.3	0	0	96.7	0	0	721	0	0	10	710	1	4.3	0	0	97.1	0	0	10/11/2018
Iraq	699	0	0	0	699	0	4.7	0	0	86.7	0	0	805	0	0	60	745	0	6.1	13	1	89.8	0	0	09/11/2018
Jordan	116	0	0	0	116	0	4.2	0	0	100.0	0	0	107	0	0	2	105	0	4.4	0	0	100.0	0	0	08/11/2018
Kuwait	69	0	0	0	69	0	7.5	0	0	92.8	0	0	56	0	0	5	51	0	7.3	0	0	89.3	0	0	11/11/2018
Lebanon	75	0	0	0	75	0	4.0	0	0	80.0	0	0	74	0	0	5	69	0	4.6	0	0	97.3	0	0	09/11/2018
Libya	88	0	0	0	88	0	4.3	0	0	96.6	0	0	108	0	0	6	102	0	5.0	1	0	96.3	0	0	10/11/2018
Morocco	143	0	0	0	143	0	1.3	0	0	67.1	0	0	162	0	0	61	101	0	2.1	20	0	68.5	0	0	30/10/2018
Oman	40	0	0	0	40	0	4.5	0	0	90.0	0	0	26	0	0	2	24	0	3.5	0	0	73.1	0	0	11/11/2018
Pakistan	10319	8	2	0	10309	0	13.2	0	0	85.6	8	0	9619	8	1	515	9095	0	14.3	116	0	88.2	8	0	11/11/2018
Palestine	43	0	0	0	43	0	2.3	0	0	97.7	0	0	40	0	0	8	32	0	2.5	0	0	92.5	0	0	08/11/2018
Qatar	18	0	0	0	18	0	6.1	0	0	100.0	0	0	9	0	0	0	9	0	2.9	0	0	100.0	0	0	11/11/2017
Saudi Arabia	276	0	0	0	276	0	3.5	0	0	98.9	0	0	165	0	0	45	120	0	2.4	13	0	95.2	0	0	04/11/2018
Somalia	345	0	0	1	344	0	6.0	1	1	99.1	0	0	300	0	0	14	274	12	5.5	1	1	98.0	0	0	11/11/2018
Sudan	570	0	0	0	570	0	3.2	0	0	96.3	0	0	496	0	0	18	478	0	3.2	3	0	97.8	0	0	08/11/2018
Syria	362	0	1	0	287	74	4.7	0	0	80.9	0	0	295	0	0	15	280	0	4.4	0	0	87.1	0	0	10/11/2018
Tunisia	67	0	0	0	67	0	2.5	0	0	74.6	0	0	60	0	0	12	48	0	2.6	2	2	81.7	0	0	09/11/2018
U.A.E	58	0	0	0	58	0	5.7	0	0	98.3	0	0	35	0	0	3	32	0	3.2	0	0	97.1	0	0	11/11/2018
Yemen	713	0	0	73	640	0	5.2	73	58	90.2	0	0	553	0	0	485	68	0	4.6	379	357	93.5	0	0	03/11/2018
EMR	19179	22	3	74	19004	76	7.7	74	59	88.9	22	0	17562	27	1	1532	15989	14	8.1	574	363	90.5	27	0	
2016	16008	33	5	1	15961	8	6.4	0	0	89.6	33	0													

* Confirmed polio cases refer to wild isolation from AFP cases or from contacts of negative index AFP cases

** Non-polio AFP per 100,000 children <15 years

*** Adequate here refers to two stool specimens collected at least 24 hours apart, within 14 days of paralysis onset and specimens received in the lab in Good Condition

**** AFP cases co infected with P1 and P3 are counted separately as wild isolates



World Health Organization – Regional Office for Eastern Mediterranean
AFP SURVEILLANCE
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Table 4 (a): Lab results of contacts' samples in EMR, 2017 - 2018

COUNTRY	2017						2018					
	# OF CONTACTS	LAB RESULTS					# OF CONTACTS	LAB RESULTS				
		WILD	VDPV	SL	NPEV	PENDING		WILD	VDPV	SL	NPEV	PENDING
AFG	1424	1	0	88	347	0	824	4	0	43	169	40
BAH	2	0	0	0	0	0	2	0	0	0	0	0
DJI	0	0	0	0	0	0	0	0	0	0	0	0
EGY	450	0	0	9	63	18	420	0	0	11	49	42
IRN	143	0	0	5	1	0	121	0	0	2	5	0
IRQ	698	0	0	18	101	16	665	0	0	17	82	37
JOR	2	0	0	0	0	0	0	0	0	0	0	0
KUW	8	0	0	0	0	2	0	0	0	0	0	0
LEB	92	0	0	2	3	21	205	0	0	3	15	20
LIB	4	0	0	0	0	1	1	0	0	0	0	0
MOR	87	0	0	0	7	0	90	0	0	0	9	19
OMA	115	0	0	1	24	1	64	0	0	2	14	5
PAK	3758	2	0	234	897	0	3426	3	0	146	779	71
PAL	0	0	0	0	0	0	0	0	0	0	0	0
QAT	0	0	0	0	0	0	0	0	0	0	0	0
SAA	0	0	0	0	0	0	5	0	0	0	0	5
SOM	1035	0	0	37	113	3	896	0	10	40	97	40
SUD	385	0	0	6	32	46	299	0	0	2	23	92
SYR	570	0	63	3	11	0	567	0	0	4	11	27
TUN	26	0	0	0	0	0	15	0	0	0	0	1
UAE	2	0	0	0	0	0	0	0	0	0	0	0
YEM	1737	0	0	43	114	667	1156	0	0	0	0	1156
EMR	10538	3	63	446	1713	775	8756	7	10	270	1253	1555

Table 4 (B): Most recent wild contacts in EMRO, 2017 - 2018

Year	Country	Data	
		Count of wild contacts	Date of Most Recent stool collection
2018	Afghanistan	4	07-08-18
	Pakistan	3	12-10-18
2018 Total		7	12-10-18
2017	Pakistan	2	04-12-17
	Afghanistan	1	21-05-17
2017 Total		3	04-12-17

Table 4 (C): Number and distribution by district of -ve index AFP cases identified as wild positive by contact in EMR, 2017-2018

YEAR	COUNTRY	PROVINCE	DISTRICT	COUNT	First case	Last case
2018	AFG	NANGARHAR	PACHIERAGAM	1	17-07-18	17-07-18
		URUZGAN	SHAHID-E-HASSA	1	08-07-18	08-07-18
	PAK	FATA	BAJOUR	1	01-09-18	01-09-18
		BALUCHISTAN	DUKKI	1	15-04-18	15-04-18
	2018 Total				4	15-04-18
2017	AFG	HILMAND	NAWZAD	1	16-04-17	16-04-17
	2017 Total				1	16-04-17



Table 5: Laboratory investigation of AFP cases with paralysis onset in 2018 up to Week (45/18) / Ending on : (11/11/2018)

Country	Polio laboratories (Nucleotide Sequencing performed by EGY, PAK, TUN, CDC and RIVM laboratories)	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results #										Indicators				Latest report Date			
			Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant pending sequence	NPEV by PCR	Non-EV	Pending ITD	% specimens positive for NPEV*		% AFP cases with culture results within 14 days	% AFP cases with ITD results within 7 days	% AFP cases with ITD results within 45 days of onset**
			L20B+	L20B+INPEV			received < / = 14 days	received > 14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV									
Afghanistan	RRL Pakistan	2784	203	20	528	1945	87	1	17	155						137						17%	90%	100%	98%	10/11/2018
Bahrain	NPL Oman / CDC	24			1	23																4%	100%		50%	05/11/2018
Djibouti	NPL Kenya / CDC																									16/09/2018
Egypt***	RRL Egypt	1046	32	6	137	834	37		15	1						18		8	1		12%	95%	100%	99%	08/11/2018	
Iran	NPL Iran / CDC	730	16		20	676	16	2	11	1						8					2%	100%	100%	99%	09/11/2018	
Iraq	RRL Egypt	807	17		95	653	30	12	11							12					12%	100%	100%	76%	08/11/2018	
Jordan	NPL Jordan / RRL EGYPT	107	4		6	96	1		3							4					8%	100%	100%	100%	11/11/2018	
Kuwait	RRL Kuwait / RIVM	55	1		4	45	2	3											1		6%	96%		98%	08/11/2018	
Lebanon	NPL Jordan / RRL EGYPT	78	2		6	67	2	1	2							2					9%	100%	100%	50%	11/11/2018	
Libya	RRL Tunisia / RIVM	102	1		11	87		3								1					10%	100%	100%	98%	19/10/2018	
Morocco	NPL Morocco / RRL Tunisia	152	1		3	135	12	1								1					3%	91%	0%	94%	09/11/2018	
Oman	NPL Oman / CDC	25			5	19	1														23%	92%		100%	05/11/2018	
Pakistan	RRL Pakistan	9379	387	43	2067	6643	229	8	6	253						298		11			19%	91%	99%	97%	10/11/2018	
Palestine & UNRWA		40			6	32		2													16%	61%		100%	08/11/2018	
Qatar	NPL Oman / CDC	9			1	8															11%	88%		100%	05/11/2018	
Saudi Arabia	NPL Saudi Arabia / CDC	161	2		2	153		4								2					1%	97%	50%	100%	28/10/2018	
Somalia	NPL Kenya / CDC	300	33	1	26	227	4	9	14		5	6 #			11	7 #			2		9%	14%		100%	11/11/2018	
Sudan	NPL Sudan / RRL Egypt	500	6		47	434	13		4						1			1			11%	96%	100%	83%	11/11/2018	
Syria	NPL Syria / RRL Egypt	295	6		10	273	6		2						2						3%	100%	100%	60%	11/11/2018	
Tunisia	RRL Tunisia	64			2	58		4													2%	98%		97%	19/10/2018	
U.A.E	NPL Oman / CDC	36			4	31	1														10%	89%		83%	05/11/2018	
Yemen	NPL Kenya / CDC																									03/11/2018
Total EMR 2018		16694	711	70	2981	12439	441	50	23	470	2	5	6		497	7		20	1	3	15%	91%	99%	97%		
Total EMR 2017		13527	558	50	2219	10038	608	55	15	369	1	4	4		394	3		1	12	1	15%	89%	99%	97%		

* Specimens from all sources including non-AFP cases, excluding environmental samples

** This indicator reflects surveillance and laboratory activities

* In 2017, 41 cVDPV2 were isolated from Syria by other Global Polio Laboratories Network (GPLN)

Syria reported a total of 74 cVDPV2 cases in 2017 out of which 8 were identified by positive contacts

Somalia in 2018 so far has a total of 12 cVDPV cases (5 cVDPV2, 6 cVDPV3 & 1 coinfection cVDPV2/cVDPV3)



Table 6: Environmental isolate by year and type

Country	Status	2015	2016	2017	2018
AFG	NEGATIVE	129	183	274	206
	PENDING				32
	WILD	20	2	42	50
AFG Total		149	185	316	288
EGY	NEGATIVE	495	528	522	444
	PENDING				18
	VDPV2	3	1		
EGY Total		498	529	522	462
IRN	NEGATIVE			6	40
	PENDING				2
IRN Total				6	42
JOR	NEGATIVE		2	32	17
	PENDING				13
JOR Total			2	32	30
LEB	NEGATIVE		4	27	10
	PENDING				27
LEB Total			4	27	37
PAK	NEGATIVE	347	462	523	426
	PENDING				50
	WILD	79	59	105	98
	WILD & VDPV2	5	3	1	
	VDPV2	8	5	4	
PAK Total		439	529	633	574
SOM	NEGATIVE			34	139
	PENDING				23
	VDPV2			2	17
	VDPV3				10
SOM Total				36	189
SYR	NEGATIVE			4	74
	PENDING				8
SYR Total				4	82
Grand Total		1086	1249	1576	1704

Table 7: Environmental Wild/VDPV isolate by site

Country	COUNTRY	Status	PROVINCE	DISTRICT	Count	First date	Last date			
2017	AFG	WILD	HILMAND	LASHKARGAH	8	26/Apr	26/Dec			
				NAHR-E-SARAJ	1	25/Sep	25/Sep			
				KABUL	1	25/Oct	25/Oct			
				KANDAHAR	18	26/Jan	27/Dec			
				KUNAR	1	25/Dec	25/Dec			
				NANGARHAR	3	24/Sep	26/Dec			
			JALALABAD	10	24/Jan	26/Dec				
			AFG Total				42	24/Jan	27/Dec	
			PAK	WILD	BALOCHISTAN	LORALAI	3	17/Sep	17/Nov	
						PISHIN	5	2/Jan	2/Oct	
	QUETTA	12				1/Jan	20/Dec			
	ZHOB	1				18/Dec	18/Dec			
	KABDULAH	12				1/Jan	15/Oct			
	CDA	5				10/Feb	10/Jul			
	PUNJAB	LAHORE				1	18/Dec	18/Dec		
		MULTAN				1	9/Jan	9/Jan		
		RAWALPINDI				8	10/Jan	10/Oct		
	SINDH	JACOBABAD				4	11/Aug	13/Dec		
		KAMBAR				1	15/Aug	15/Aug		
		KHIBALDIA				2	8/Aug	3/Nov		
		KHIGADAP	21	9/Jan	12/Dec					
		KHIKORANGI	1	16/Oct	16/Oct					
KHILANDHI		7	16/Mar	14/Dec						
KHISITE	5	7/Aug	4/Dec							
SUKKUR	2	11/Apr	19/Sep							
KHIMALIR	6	3/Feb	10/Oct							
WILD & VDPV2	BALOCHISTAN	KABDULAH	1	15/Jul	15/Jul					
		PISHIN	1	2/May	2/May					
PAK Total				110	1/Jan	20/Dec				
SOM	VDPV2	BANADIR	WABERI	2	22/Oct	2/Nov				
SOM Total				2	22/Oct	2/Nov				
2017 Total				154	1/Jan	27/Dec				
2018	AFG	WILD	HILMAND	LASHKARGAH	2	8/Jan	25/Sep			
				HIRAT	1	25/Jun	25/Jun			
				KABUL	3	26/Feb	26/Jun			
				KANDAHAR	28	8/Jan	3/Oct			
				KHOST	1	25/Sep	25/Sep			
				KUNAR	2	24/Apr	25/Sep			
				NANGARHAR	2	28/Jan	25/Feb			
				JALALABAD	11	27/Jan	25/Jul			
				AFG Total				50	8/Jan	3/Oct
				PAK	WILD	BALOCHISTAN	LORALAI	2	17/Mar	17/Aug
	QUETTA	8	13/Feb				12/Oct			
	KABDULAH	4	1/Jan				1/Oct			
	CDA	6	10/Jan				10/Oct			
	PUNJAB	LAHORE	7				11/Jun	11/Oct		
		RAWALPINDI	11				10/Jan	10/Oct		
		DGKHAN	2				12/Feb	12/Sep		
	SINDH	HYDERABAD	1				9/Feb	9/Feb		
		JACOBABAD	3				12/Feb	12/Sep		
		KAMBAR	3				7/Apr	9/Jul		
		KHIBALDIA	2				1/Aug	4/Sep		
		KHIGADAP	12				15/Feb	10/Oct		
		KHILANDHI	3				10/Jan	30/Jul		
		KHISITE	2				1/Jan	3/Sep		
		SUKKUR	1				8/Feb	8/Feb		
		KHILIAQAT	1				7/Mar	7/Mar		
		KHISADDAR	1				10/Sep	10/Sep		
	FATA	KHIMALIR	1				13/Sep	13/Sep		
		BAJOUR	4				19/May	24/Sep		
		KHYBER PAKHTUNKHWA	BANNU				1	31/Mar	31/Mar	
	KOHAT		5				5/Jan	27/Sep		
	MARDAN		1				15/Oct	15/Oct		
	NOWSHERA		1				18/Sep	18/Sep		
	PESHAWAR	16	10/Jan	10/Oct						
PAK Total				98	1/Jan	15/Oct				
SOM	VDPV2	BANADIR	HAMAR WEYN	10	4/Jan	13/Sep				
			HODAN	1	22/Feb	22/Feb				
			WABERI	6	1/Mar	20/Sep				
			HAMAR WEYN	5	8/Mar	5/Apr				
			WABERI	5	8/Mar	23/Aug				
SOM Total				27	4/Jan	20/Sep				
2018 Total				175	1/Jan	15/Oct				



Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2018 - 11/11/2018

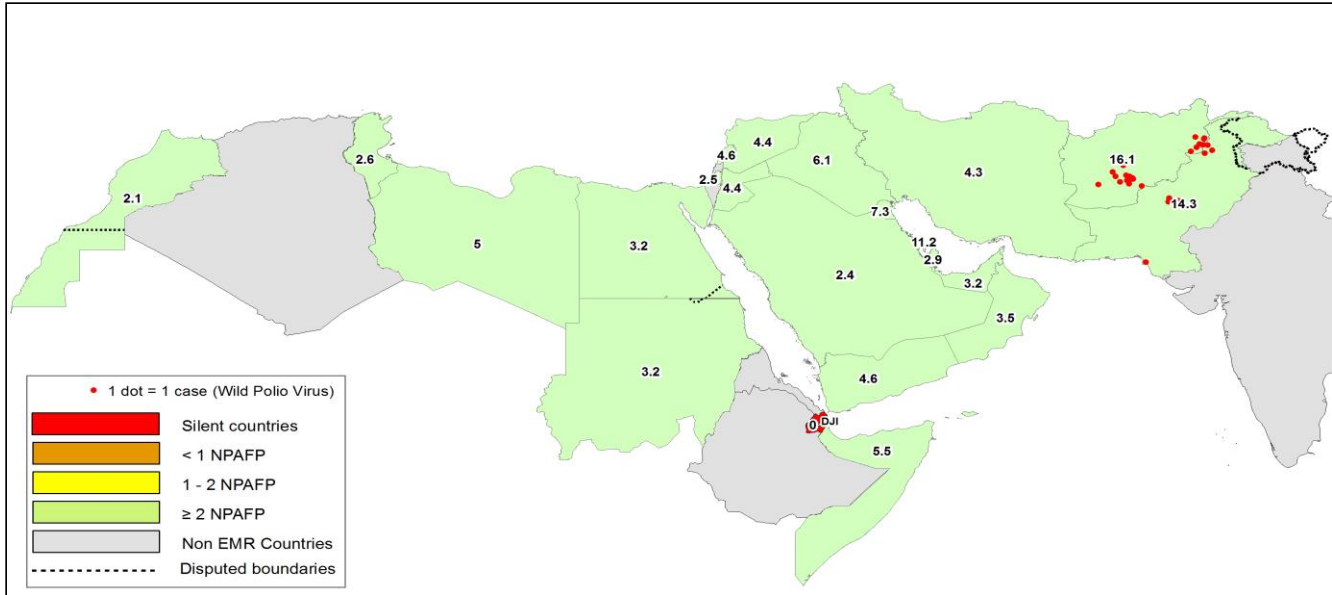


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2018 - 11/11/2018

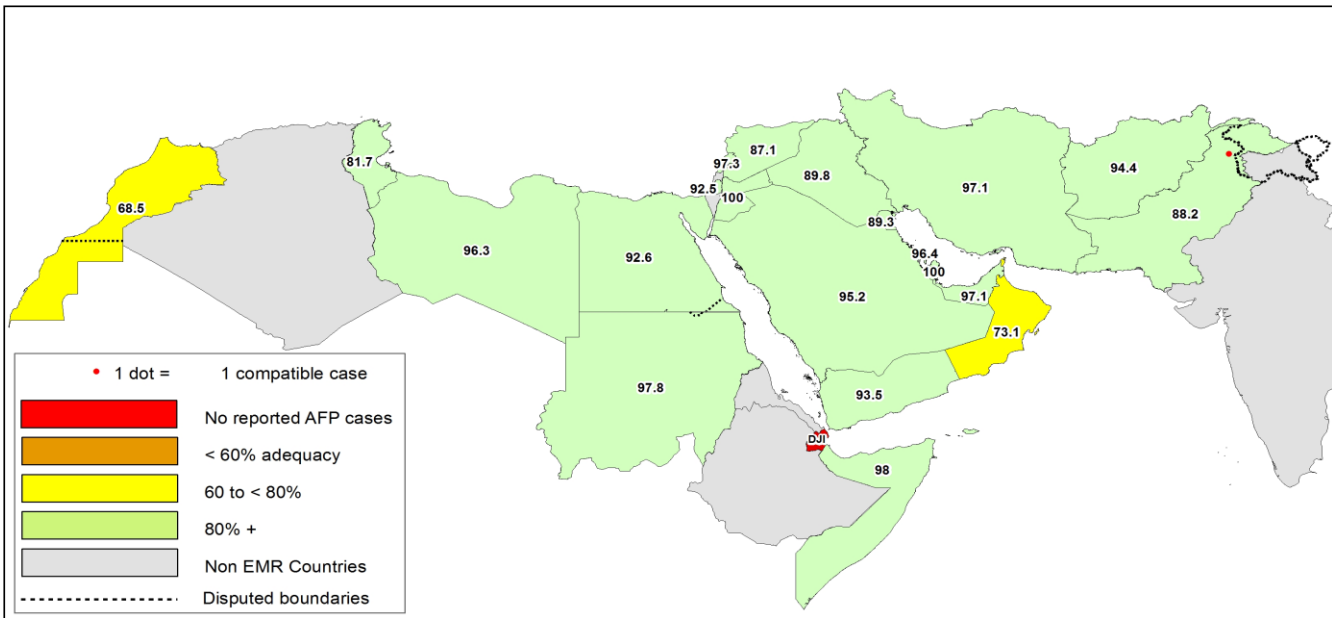


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2017 - 2018

Year	COUNTRY	Count	First Case	Last Case
2018	AFG	19	01-01-18	02-10-18
	PAK	8	08-03-18	07-10-18
2018 Total		27	01-01-18	07-10-18
2017	AFG	14	13-01-17	28-12-17
	PAK	8	28-01-17	15-11-17
2017 Total		22	13-01-17	28-12-17

Last reported wild Polio P3 from Pakistan with date of onset 18/04/2012



Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2018 - 11/11/2018

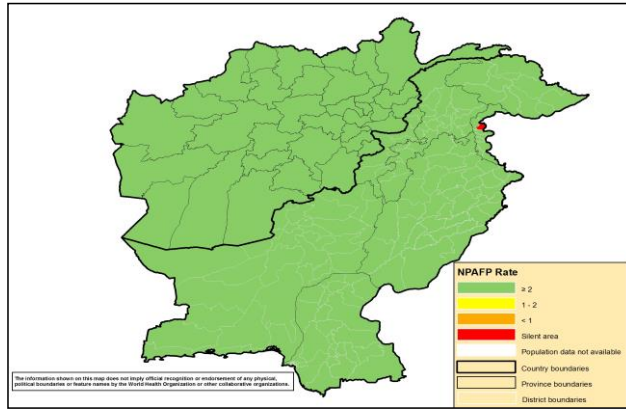


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2018 -11/11/2018

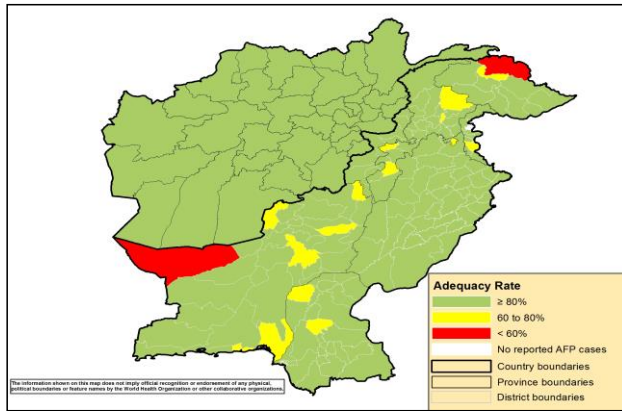
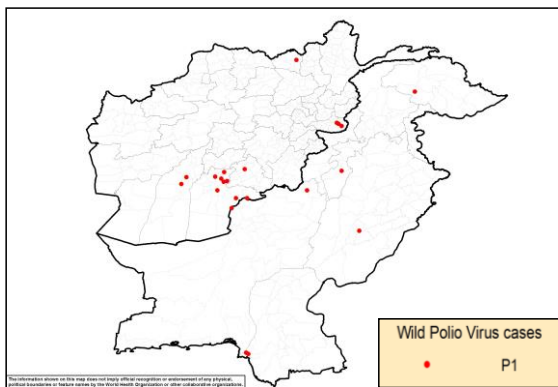


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

5a: 01/01/2017 - 31/12/2017



5b: 01/01/2018 - 11/11/2018

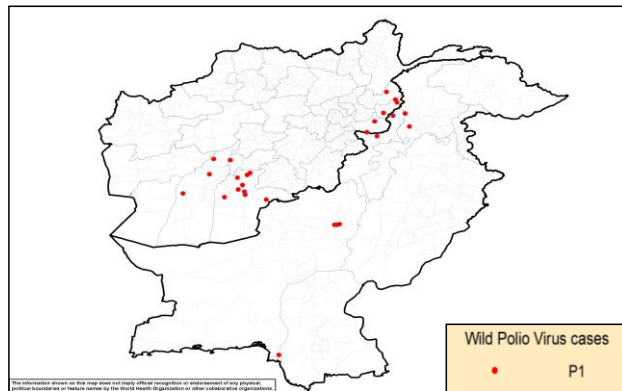




Table 9: Wild Polio cases by district and date of onset of paralysis, Afghanistan 2017-2018						
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case	
2018	HILMAND	NAWZAD	2	1-Sep-18	2-Oct-18	
		NAD-E-ALI	1	1-Jun-18	1-Jun-18	
	NURISTAN	PORUNS	1	26-Sep-18	26-Sep-18	
	KANDAHAR	MAYWAND	1	24-Sep-18	24-Sep-18	
		KANDAHAR	2	11-Aug-18	27-Aug-18	
		ARGHANDAB (K)	1	17-Jul-18	17-Jul-18	
		SHAHWALIKOT	3	5-Jan-18	27-Apr-18	
		KHAKREZ	1	25-Feb-18	25-Feb-18	
		SPINBOLDAK	1	6-Jan-18	6-Jan-18	
	NANGARHAR	PACHIERAGAM	1	17-Jul-18	17-Jul-18	
		KAMA	1	1-Jan-18	1-Jan-18	
	URUZGAN	SHAHID-E-HASSAS	1	8-Jul-18	8-Jul-18	
	KUNAR	CHAWKAY	1	22-Jun-18	22-Jun-18	
		GHAZIABAD	2	14-Feb-18	3-Mar-18	
2018 Total			19	1-Jan-18	2-Oct-18	
2017	KANDAHAR	SPINBOLDAK	1	28-Dec-17	28-Dec-17	
		SHAHWALIKOT	5	19-Jun-17	3-Dec-17	
		KANDAHAR	1	13-Jan-17	13-Jan-17	
	NANGARHAR	MUHMAND DARA	1	5-Nov-17	5-Nov-17	
		BATIKOT	2	15-Sep-17	11-Oct-17	
	ZABUL	ARGHANDAB (Z)	1	10-Jul-17	10-Jul-17	
	HILMAND	NAWZAD	1	16-Apr-17	16-Apr-17	
		NAHR-E-SARAJ	1	21-Jan-17	21-Jan-17	
	KUNDUZ	DASHT-E-ARCHI	1	21-Feb-17	21-Feb-17	
	2017 Total			14	13-Jan-17	28-Dec-17

Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2017-2018						
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case	
2018	FATA	BAJOUR	2	01-09-18	07-10-18	
		KHYBER	1	25-09-18	25-09-18	
	SINDH	KHIGADAP	1	22-09-18	22-09-18	
	KHYBER PAKHTOON	CHARSADA	1	01-08-18	01-08-18	
		BALUCHISTAN	DUKKI	3	08-03-18	18-05-18
2018 Total			8	08-03-18	07-10-18	
2017	BALUCHISTAN	ZHOB	1	15-11-17	15-11-17	
		KABDULAH	2	11-06-17	13-11-17	
	SINDH	KHIGADAP	1	09-11-17	09-11-17	
		KHIGIQBAL	1	11-08-17	11-08-17	
	KHYBER PAKHTOON	LAKKIMRWT	1	21-08-17	21-08-17	
	GILGIT BALTISTAN	DIAMER	1	13-02-17	13-02-17	
PUNJAB	LODHRAN	1	28-01-17	28-01-17		
2017 Total			8	28-01-17	15-11-17	

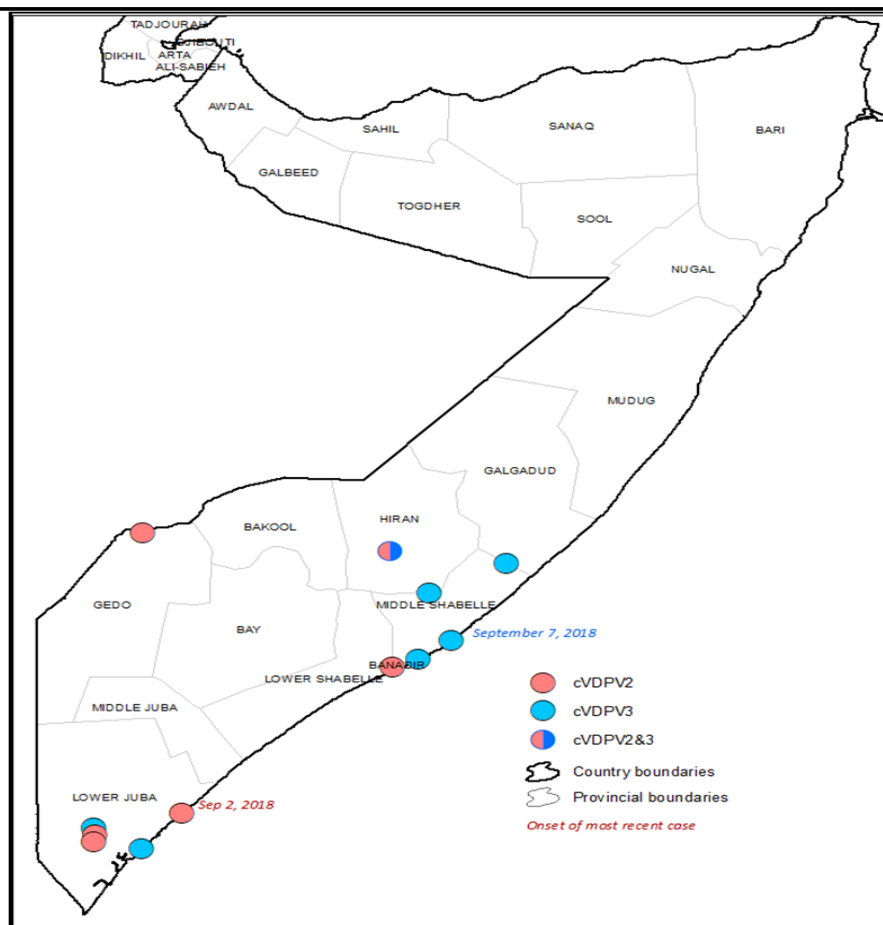


Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2017-2018

Year	COUNTRY	PROVINCE	DISTRICT	cVDPV2			cVDPV3		
				Count	First Case	Last Case	Count	First Case	Last Case
2017	SYR	HOMS	TADMOUR	1	10-Jul-17	10-Jul-17			
		DEIR_AL_ZOUR	DEIR ALZOUR	1	30-Jun-17	30-Jun-17			
		DEIR_AL_ZOUR	BOKAMAL	12	25-Jun-17	21-Sep-17			
		DEIR_AL_ZOUR	MAYADEEN	58	5-Mar-17	9-Sep-17			
		RAQUA	THAWRA	1	16-Jun-17	16-Jun-17			
		RAQUA	TALABYAD	1	25-Apr-17	25-Apr-17			
SYR Total				74	5-Mar-17	21-Sep-17			
2017 Total				74	5-Mar-17	21-Sep-17			
2018	SOM	LOWER JUBA	Jamaame West	1	02-Sep-18	02-Sep-18			
			KISMAYO	2	29-Jul-18	30-Jul-18	2	24-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD				1	07-Sep-18	07-Sep-18
			MAHADAY				1	29-Jun-18	29-Jun-18
		WARSHEIKH				2	16-May-18	23-May-18	
		BANADIR	DANYILE	1	10-Jul-18	10-Jul-18			
HIRAN	BULO BURTI	1	11-May-18	11-May-18	1	11-May-18	11-May-18		
GEDO	DOLO	1	26-May-18	26-May-18					
SOM Total				6	11-May-18	2-Sep-18	7	11-May-18	7-Sep-18
2018 Total				6	11-May-18	2-Sep-18	7	11-May-18	7-Sep-18

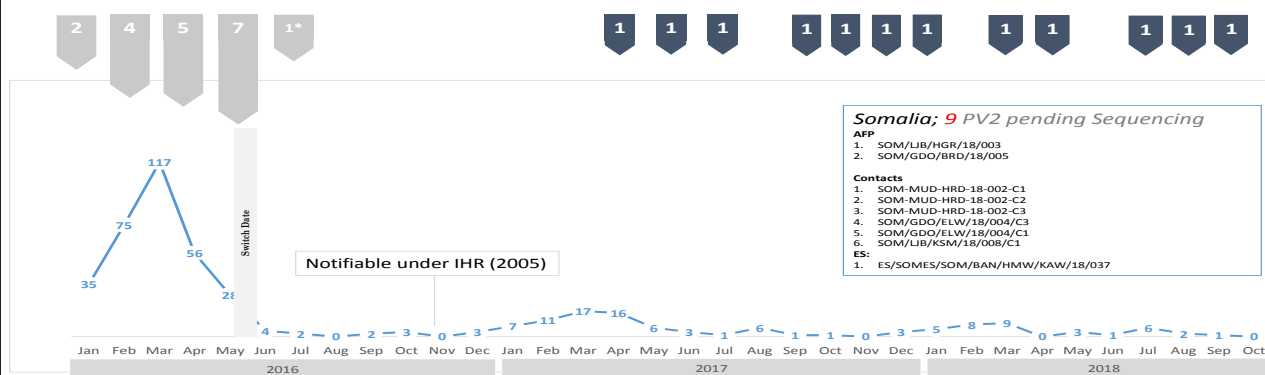
Somalia in 2018 so far has a total of 12 cVDPV cases (5 cVDPV2, 6 cVDPV3 & 1 coinfection cVDPV2/cVDPV3)

Figure 6: Somalia cVDPV cases by type and district 01/01/2018 - 11/11/2018





Sabin Like Type-2 Poliovirus Isolates (H & E) EMR, 2016-17-18



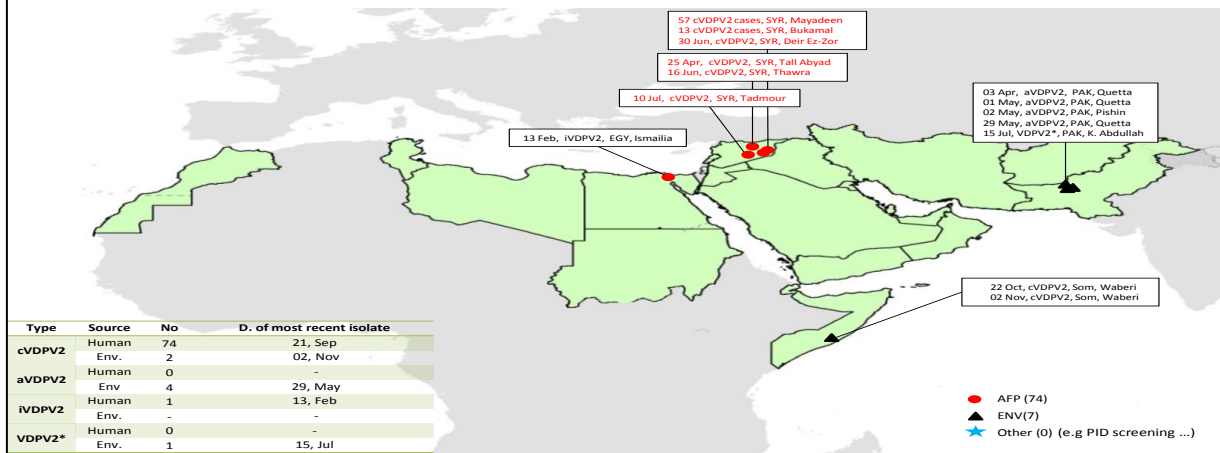
* Focused TOPV campaign in El Tur district (S. Sana'i/Egy) as a response to VDPV2 isolation

TOPV SIAs

mOPV2 SIAs



VDPV2 isolates, EMR countries, 2017



VDPV2 isolates, EMR countries, 2018

