

Highlights of Polio Fax Bulletin No. 1050 for Week 46 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 to date remains 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 to date remains 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: Five new positive environmental samples for WPV1 reported this week, which include four from Pakistan and one from Afghanistan and four .
 - i. Afghanistan: One new positive environmental sample reported this week from Jalalabad district, Nangarhar province. The total positive environmental samples from Afghanistan in 2018 to date are 51 with most recent positive sample collected on 24 October 2018.
 - ii. Pakistan: Four new positive environmental samples reported this week, which include one from Quetta district, Balochistan province, one from Lahore district, Punjab province and two from Khyber Pakhtunkhwa province (one each from Peshawar district and Nowshera district). The total positive environmental samples from Pakistan in 2018 to date are 102 with most recent positive sample collected on 24 October 2018.

NOTE: Advance notification of six new positive environmental samples: five from Afghanistan [Lashkargah (1), Jalalabad (2), and Kandahar (2) districts] and one from Pakistan (Bajour 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 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 case is 2 September 2018.

- ii. Two new cVDPV2 positive environmental samples are reported from Somalia. These include one from Hamar Weyn district with date of stool collection on 20 September 2018 and the other from Hodan with date of stool collection 4 October 2018. Accordingly, in 2018 so far, VDPV2 has been isolated from 19 sewage samples in Mogadishu and date of specimen collection of recent most positive sample is 4 October 2018. One of the above 19 samples has co-infection of cVDPV2 and cVDPV3.
- c. cVDPV3:
- i. The date of onset of the most recent cVDPV3 case is 7 September, 2018.
 - 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. 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

19-Nov-18

Week 46, ending 18 November 2018

Number 1050

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

Country	Reported AFP cases by week of onset - Week (46/18) / Ending on : 18/11/2018														
	Total AFP 2016	Total AFP 2017	Total AFP to date, 2018	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	W46 18 Nov 18
Afghanistan	2905	3094	2934	65	54	80	73	74	84	49	59	65	70	48	3
Bahrain	14	18	29	1	1	0	0	1	0	0	2	1	1	1	0
Djibouti	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	1092	1242	1084	21	20	28	31	19	28	32	18	25	16	5	
Iran	776	820	732	13	25	15	13	22	23	17	5	13	6	0	0
Iraq	605	699	830	13	20	25	21	9	17	19	18	14	26	7	1
Jordan ****	107	116	107	1	4	3	1	2	1	3	1	0	1	0	
Kuwait	50	69	57	0	0	1	0	0	2	1	1	3	1	1	1
Lebanon ****	111	75	76	1	0	2	3	1	0	2	1	1	0	2	
Libya	70	88	108	5	4	3	2	4	1	1	2	2	0	0	
Morocco	84	143	162	2	7	2	6	7	4	4	6	1			
Oman	39	40	26	1	1	1	1	3	1	1	1	0	1	0	0
Pakistan	7848	10319	9842	245	251	205	267	236	197	261	222	202	134	16	0
Palestine ****	46	43	40	1	1	1	1	0	1	1	1	0	0	0	0
Qatar	9	18	9	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	273	276	169	6	5	3	2	5	2	2	5	3	1	2	0
Somalia	316	345	312	14	10	6	10	7	10	3	6	6	4	5	1
Sudan	509	570	513	15	11	11	20	15	12	7	10	11	10	6	0
Syria ****	303	362	301	4	4	9	4	5	7	12	6	5	7	2	
Tunisia	90	67	61	2	0	0	0	2	2	0	0	1	1	0	
U.A.E	42	58	37	1	0	1	0	0	1	1	0	0	1	1	0
Yemen	715	713	553	14	12	8	7	10	11	12	12	3			
Total EMR	16007	19179	17982	425	430	404	462	422	404	428	376	356	280	96	6

□ No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2016	Total year 2017	18/11		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	12	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	0	0	
Egypt	0	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	0		
Iraq	0	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	0		
Kuwait	0	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	0		
Libya	0	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	0		
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	20	8	8	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	0		
Qatar	0	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	0		
Somalia	0	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	0		
Syria ****	0	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	0		
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Yemen	0	0	0	0												
Total EMR	33	22	20	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 (46/18) / Ending on : 18/11/2018

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	2934	19	0	227	2688	0	16.3	19	2	94.3	19	0	18/11/2018
Bahrain	18	0	0	0	18	0	6.2	0	0	100.0	0	0	29	0	0	11	18	0	11.3	3	0	96.6	0	0	18/11/2018
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	14/11/2018
Egypt	1242	0	0	0	1240	2	3.3	0	0	94.4	0	0	1084	0	0	67	1017	1	3.2	5	0	92.6	0	0	15/11/2018
Iran	820	0	0	0	820	0	4.3	0	0	96.7	0	0	732	0	0	5	726	1	4.3	0	0	97.1	0	0	18/11/2018
Iraq	699	0	0	0	699	0	4.7	0	0	86.7	0	0	830	0	0	68	762	0	6.2	9	0	90.0	0	0	18/11/2018
Jordan	116	0	0	0	116	0	4.2	0	0	100.0	0	0	107	0	0	2	105	0	4.3	0	0	100.0	0	0	15/11/2018
Kuwait	69	0	0	0	69	0	7.5	0	0	92.8	0	0	57	0	0	4	53	0	7.3	0	0	87.7	0	0	18/11/2018
Lebanon	75	0	0	0	75	0	4.0	0	0	80.0	0	0	76	0	0	5	71	0	4.6	0	0	97.4	0	0	16/11/2018
Libya	88	0	0	0	88	0	4.3	0	0	96.6	0	0	108	0	0	5	103	0	4.9	0	0	96.3	0	0	17/11/2018
Morocco	143	0	0	0	143	0	1.3	0	0	67.1	0	0	162	0	0	61	101	0	2.0	23	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	1	25	0	3.4	0	0	73.1	0	0	18/11/2018
Pakistan	10319	8	2	0	10309	0	13.2	0	0	85.6	8	0	9842	8	1	560	9273	0	14.3	119	0	88.1	8	0	18/11/2018
Palestine	43	0	0	0	43	0	2.3	0	0	97.7	0	0	40	0	0	7	33	0	2.4	0	0	92.5	0	0	18/11/2018
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	169	0	0	42	127	0	2.4	12	0	95.3	0	0	18/11/2018
Somalia	345	0	0	1	344	0	6.0	1	1	99.1	0	0	312	0	0	22	279	12	5.6	1	1	98.1	0	0	18/11/2018
Sudan	570	0	0	0	570	0	3.2	0	0	96.3	0	0	513	0	0	26	487	0	3.2	1	0	97.5	0	0	18/11/2018
Syria	362	0	1	0	287	74	4.7	0	0	80.9	0	0	301	0	0	16	285	0	4.4	0	0	87.4	0	0	17/11/2018
Tunisia	67	0	0	0	67	0	2.5	0	0	74.6	0	0	61	0	0	3	58	0	2.6	1	1	80.3	0	0	16/11/2018
U.A.E	58	0	0	0	58	0	5.7	0	0	98.3	0	0	37	0	0	4	33	0	3.3	0	0	97.3	0	0	19/11/2018
Yemen	713	0	0	73	640	0	5.2	73	58	90.2	0	0	553	0	0	485	68	0	4.5	387	362	93.5	0	0	03/11/2018
EMR	19179	22	3	74	19004	76	7.7	74	59	88.9	22	0	17982	27	1	1621	16321	14	8.1	580	366	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
Week 46, ending 18 November 2018

19-Nov-18
Number 1050

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	869	4	0	43	174	75
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	429	0	0	11	50	39
IRN	143	0	0	5	1	0	121	0	0	2	5	0
IRQ	698	0	0	18	101	16	665	0	0	19	82	27
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	206	0	0	3	15	21
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	68	0	0	2	14	7
PAK	3758	2	0	234	897	0	3498	3	0	147	786	87
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	932	0	10	44	102	65
SUD	385	0	0	6	32	46	304	0	0	2	23	97
SYR	570	0	63	3	11	0	571	0	0	7	11	18
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	8932	7	10	280	1271	1617

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 (46/18) / 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	2876	204	20	533	1973	132	14	17	156						137					17%	90%	100%	98%	17/11/2018	
Bahrain	NPL Oman / CDC	24			1	23															4%	100%		50%	19/11/2018	
Djibouti	NPL Kenya / CDC																								14/11/2018	
Egypt***	RRL Egypt	1069	32	6	142	851	38		15	1						18		8	1		12%	95%	100%	99%	15/11/2018	
Iran	NPL Iran / CDC	740	16		20	692	9	3	11	1						8					2%	100%	100%	99%	17/11/2018	
Iraq	RRL Egypt	829	17		98	661	38	15	11							12					13%	100%	100%	76%	15/11/2018	
Jordan	NPL Jordan / RRL EGYPT	107	4		6	97			3							4					8%	100%	100%	100%	15/11/2018	
Kuwait	RRL Kuwait / RIVM	55	1		4	45	1	4											1		6%	96%		98%	08/11/2018	
Lebanon	NPL Jordan / RRL EGYPT	79	2		6	69	1	1	2							2					9%	100%	100%	50%	15/11/2018	
Libya	RRL Tunisia / RIVM	107	1		11	94	1									1					10%	100%	100%	97%	17/11/2018	
Morocco	NPL Morocco / RRL Tunisia	158	2		4	144	8									1			1		3%	92%	0%	94%	16/11/2018	
Oman	NPL Oman / CDC	26			5	21															22%	92%		100%	19/11/2018	
Pakistan	RRL Pakistan	9574	389	43	2089	6741	288	19	6	254						298		10			19%	91%	99%	97%	17/11/2018	
Palestine & UNRWA		40			6	32		2													16%	61%		100%	18/11/2018	
Qatar	NPL Oman / CDC	9			1	8															11%	88%		100%	19/11/2018	
Saudi Arabia	NPL Saudi Arabia / CDC	188	2		4	163	18	1								2					2%	96%	50%	100%	18/11/2018	
Somalia	NPL Kenya / CDC	312	34	1	27	229	7	14	15		5	6 #			11	7 #			2		10%	14%		100%	18/11/2018	
Sudan	NPL Sudan / RRL Egypt	516	6		49	439	22		4						1			1			11%	96%	100%	83%	18/11/2018	
Syria	NPL Syria / RRL Egypt	302	6		10	274	10	2	1						1						3%	100%	100%	33%	15/11/2018	
Tunisia	RRL Tunisia	66			2	63	1														2%	98%		97%	17/11/2018	
U.A.E	NPL Oman / CDC	36			4	32															10%	89%		83%	19/11/2018	
Yemen	NPL Kenya / CDC																								03/11/2018	
Total EMR 2018		17113	716	70	3022	12651	574	75	23	472	2	5	6		496	7		19	1	4	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	208
	PENDING				29
	WILD	20	2	42	51
AFG Total		149	185	316	288
EGY	NEGATIVE	495	528	522	453
	PENDING				16
	VDPV2	3	1		
EGY Total		498	529	522	469
IRN	NEGATIVE			6	42
	PENDING				2
IRN Total				6	44
JOR	NEGATIVE		2	32	17
	PENDING				14
JOR Total			2	32	31
LEB	NEGATIVE			4	27
	PENDING				27
LEB Total			4	27	37
PAK	NEGATIVE	347	462	523	441
	PENDING				31
	WILD	79	59	105	102
	WILD & VDPV2	5	3	1	
	VDPV2	8	5	4	
PAK Total		439	529	633	574
SOM	NEGATIVE			34	156
	PENDING				11
	VDPV2			2	19
	VDPV3				10
SOM Total				36	196
SYR	NEGATIVE			4	75
	PENDING				8
SYR Total				4	83
Grand Total		1086	1249	1576	1722

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			
				ASADABAD	1	25/Dec	25/Dec			
				BEHSUD	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			
	LAHORE	1	18/Dec				18/Dec			
	MULTAN	1	9/Jan				9/Jan			
	RAWALPINDI	8	10/Jan				10/Oct			
	JACOBABAD	4	11/Aug				13/Dec			
	PAK	WILD & VDPV2 VDPV2	BALOCHISTAN	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				
PESHAWAR				8	10/Jan	11/Dec				
KABDULAH				1	15/Jul	15/Jul				
PISHIN	1	2/May	2/May							
QUETTA	3	3/Apr	29/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			
				HERAT	1	25/Jun	25/Jun			
				KABUL	3	26/Feb	26/Jun			
				KANDAHAR	28	8/Jan	3/Oct			
				MATUN	1	25/Sep	25/Sep			
				ASADABAD	2	24/Apr	25/Sep			
				BEHSUD	2	28/Jan	25/Feb			
				JALALABAD	12	27/Jan	24/Oct			
				AFG Total	51	8/Jan	24/Oct			
				PAK	WILD	BALOCHISTAN	LORALAI	2	17/Mar	17/Aug
							QUETTA	9	13/Feb	20/Oct
							KABDULAH	4	1/Jan	1/Oct
	CDA	6	10/Jan				10/Oct			
	LAHORE	8	11/Jun				11/Oct			
	RAWALPINDI	11	10/Jan				10/Oct			
	DGKHAN	2	12/Feb				12/Sep			
	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			
	KHIMALIR	1	13/Sep				13/Sep			
	BAJOUR	4	19/May				24/Sep			
	BANNU	1	31/Mar				31/Mar			
	KOHAT	5	5/Jan				27/Sep			
	MARDAN	1	15/Oct				15/Oct			
	NOWSHERA	2	18/Sep				18/Oct			
	PESHAWAR	17	10/Jan				24/Oct			
	PAK Total	102	1/Jan				24/Oct			
	SOM	VDPV2	BANADIR				HAMAR WEYN	11	4/Jan	20/Sep
							HODAN	2	22/Feb	4/Oct
							WABERI	6	1/Mar	20/Sep
				HAMAR WEYN	5	8/Mar	5/Apr			
				WABERI	5	8/Mar	23/Aug			
	SOM Total	29	4/Jan	4/Oct						
2018 Total				182	1/Jan	24/Oct				



Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2018 - 18/11/2018

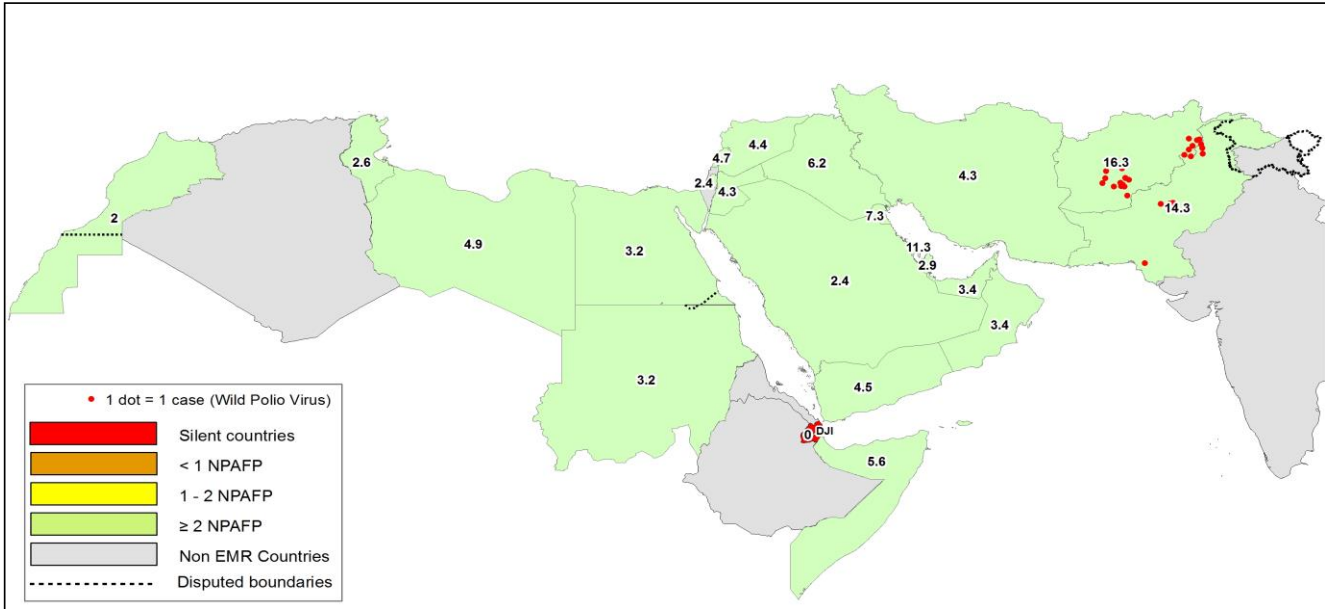


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2018 - 18/11/2018

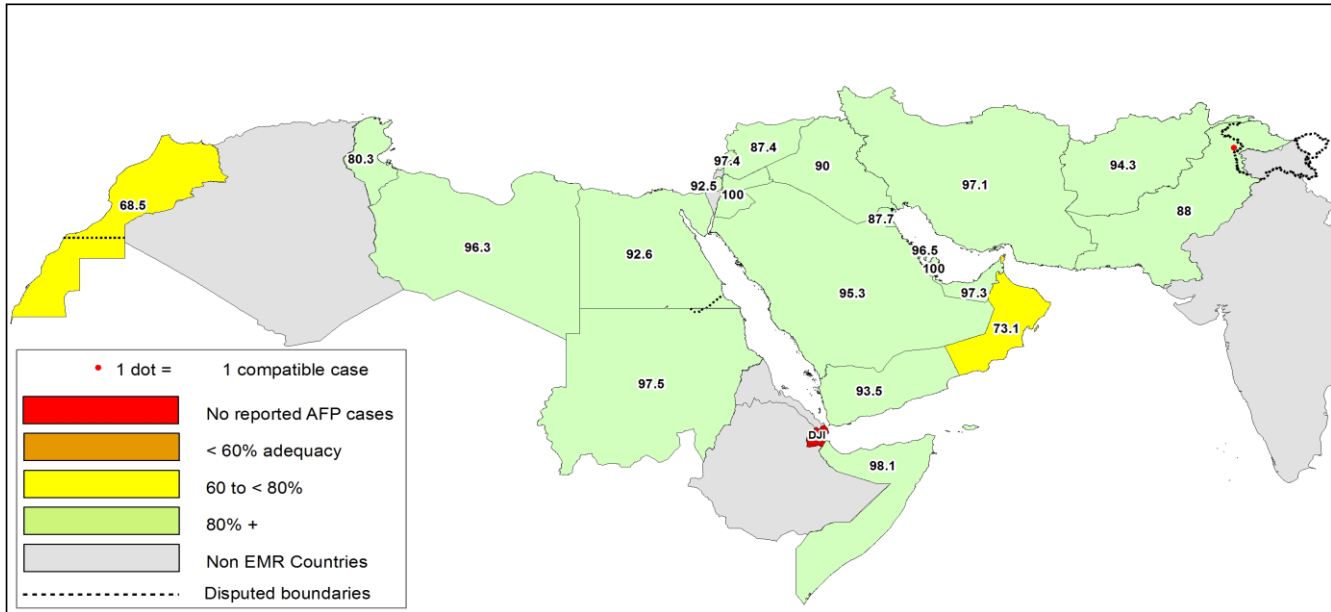


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2017 - 2018

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 - 18/11/2018

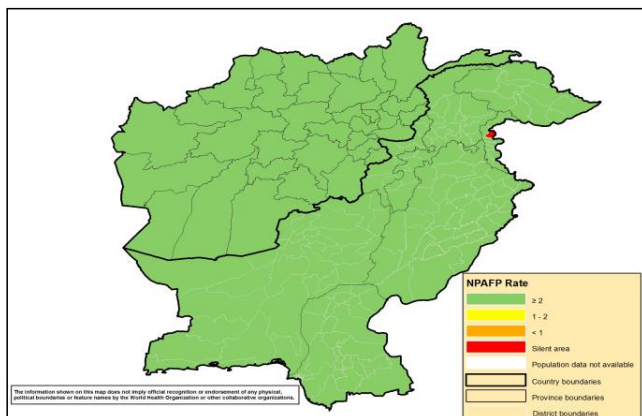


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2018 -18/11/2018

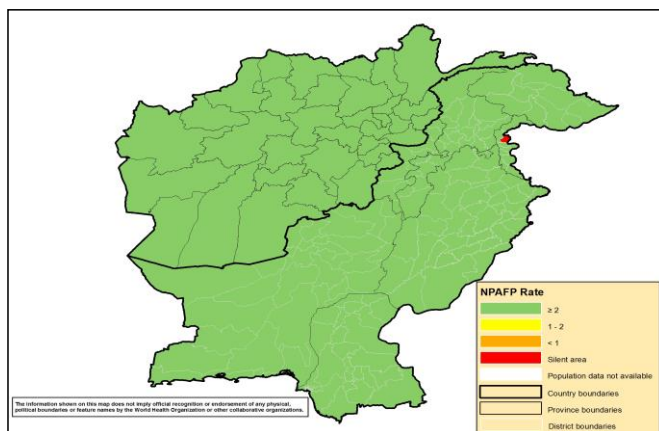
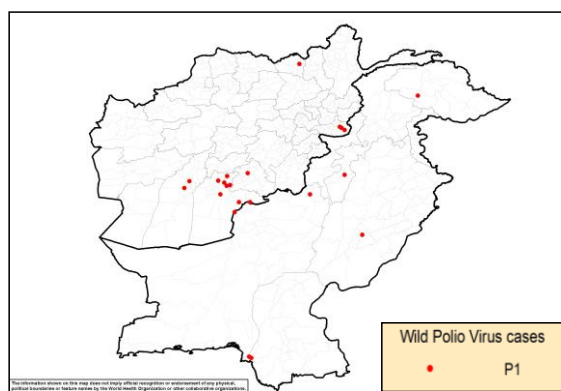
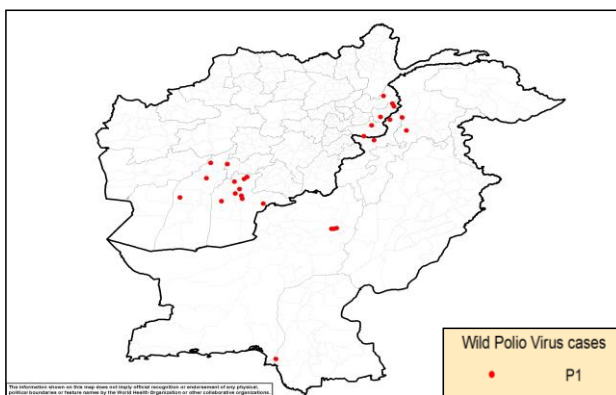


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5b: 01/01/2018 - 18/11/2018





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

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
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

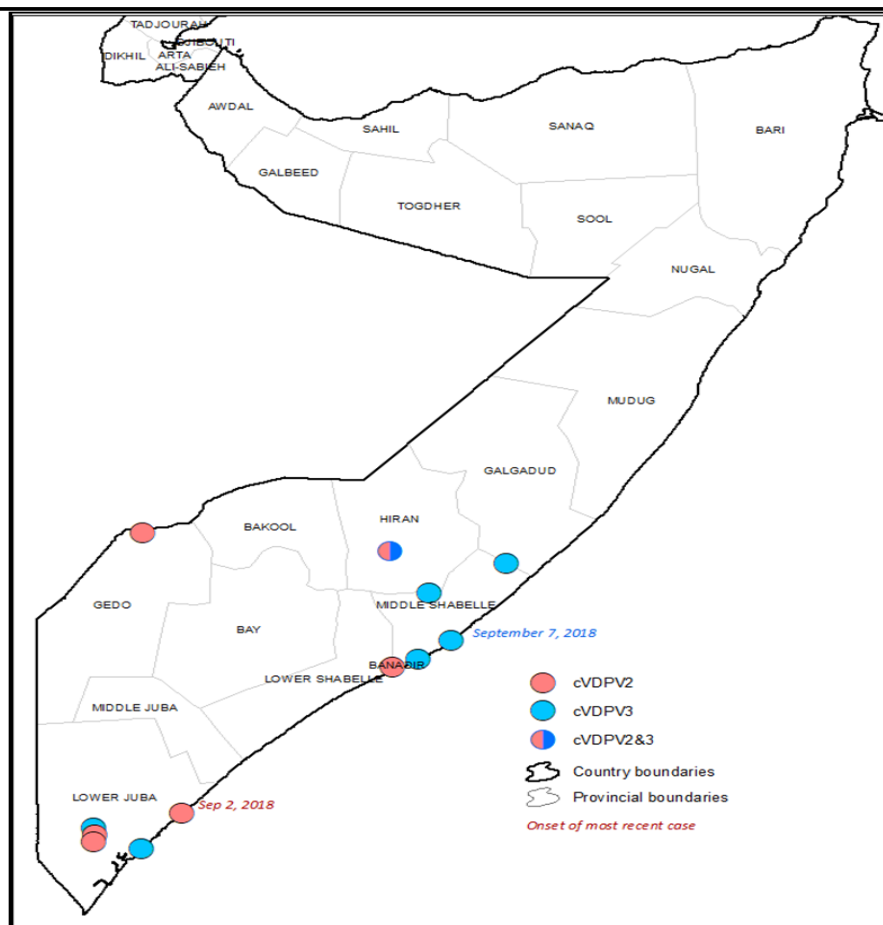


Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2017-2018

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 BURTU	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

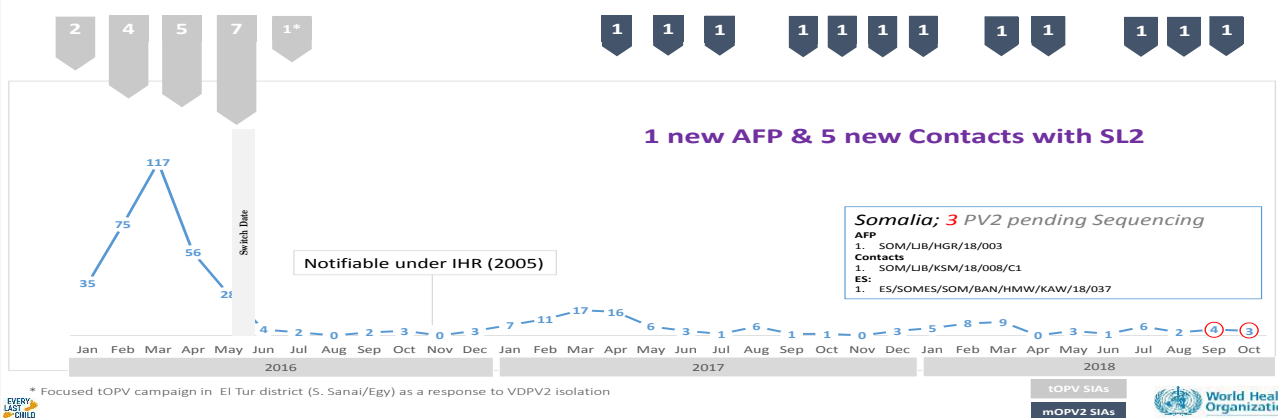
Somalia in 2018 so far has a total of 12 cVDPV cases (5 cVDPV2, 6 cVDPV3 & 1 coinfection cVDPV2/cVDPV3)

Figure 6: Somalia cVDPV cases by type and district 01/01/2018 - 18/11/2018

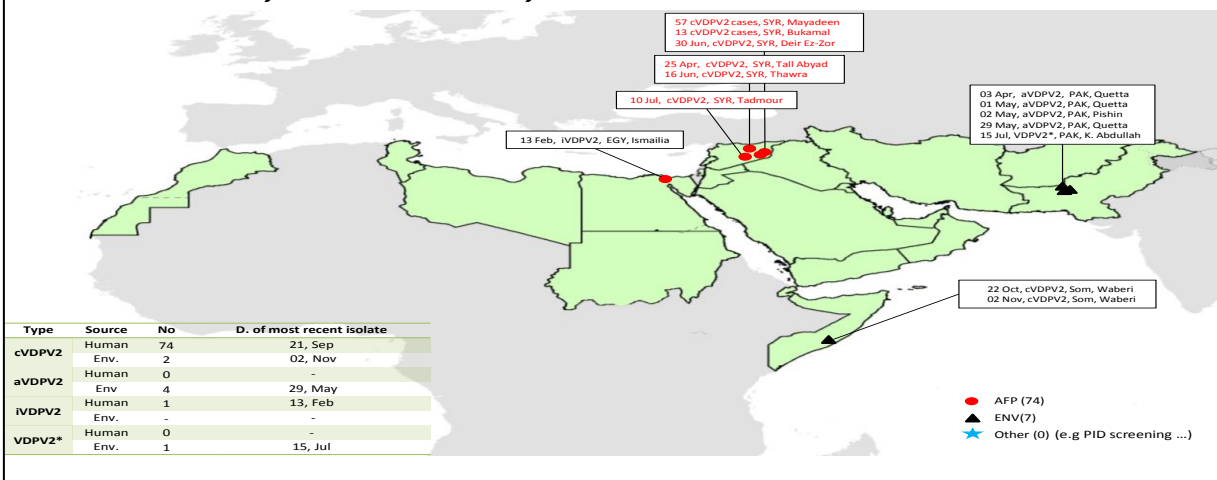




Sabin Like Type-2 Poliovirus Isolates (H & E) EMR, 2016-17-18



VDPV2 isolates, EMR countries, 2017



VDPV2 isolates, EMR countries, 2018

