

Highlights of Polio Fax Bulletin No. 1046 for Week 42 2018

I. Poliovirus Transmission

1. Endemic countries (PAKISTAN & AFGHANISTAN):

- a. Human samples: Two new wild poliovirus type-1 (WPV1) cases were reported this week from Pakistan. Total WPV1 cases for 2018 to date are 22 cases (16 from Afghanistan and 6 from Pakistan).
 - i. Afghanistan: The total number of WPV1 cases in Afghanistan in 2018 to date remains 16 from five provinces (Hilmand-2 cases, Kandhar-8 cases, Kunar- 3 cases, Nangarhar-2 cases and Uruzgan-1 case). The most recent reported case has date of onset of paralysis on 1 September 2018.
 - ii. Pakistan: Two new WPV1 cases reported from Pakistan this week. One of them is from newly infected Khyber district, FATA province with date of onset of paralysis 25 September 2018. The 55-month old female child reportedly received 7 doses of OPV during supplementary immunization activities (SIAs). The second WPV1 reported case is from Karachi Gaddap of Karachi district, Sindh province with date of onset of paralysis 22 September 2018. The 42-month old female child received 10 doses of OPV per recall including 3 doses from routine and 7 during SIAs. The total number of WPV1 cases in Pakistan in 2018 to date is six from four infected districts in four provinces (Balochistan-3 cases, Khyber Pakhtunkhwa-1 case, Khyber Pakhtunkhwa Tribal District -1 case and Sindh-1 case). Date of onset of paralysis of the most recent case is 25 September 2018.
- b. Environmental samples: Five new positive environmental samples for WPV1 reported this week - One from Afghanistan and four from Pakistan.
 - i. Afghanistan: One new positive environmental sample reported this week from Kandahar district, Kandahar province. This brings the total positive environmental samples from Afghanistan in 2018 to date to 46 with most recent positive sample collected on 25 September 2018.
 - ii. Pakistan: Four new positive environmental samples reported this week. These include one each from Kila Abdullah district, Balochistan province; and Nowshera district (new infected district), Kohat district and Peshawar district in Khyber Pakhtunkhwa province. This brings the total positive environmental samples from Pakistan in 2018 to date to 89 with most recent positive sample collected on 1 October 2018.

II. Outbreak response countries

1. SOMALIA:

○ cVDPV2:

- a. No new cVDPV2 cases reported this week. The date of onset of the most recent cVDPV2 is 2 September 2018.
- b. No new cVDPV2 positive environmental sample was reported this week. In 2018 so far, cVDPV2 isolated from 13 sewage samples in Mogadishu and date of specimen collection of recent

most positive sample is 6 September 2018. One of the above 13 samples has co-infection of cVDPV2 and cVDPV3.

- cVDPV3:
 - a. No new cVDPV3 case was reported this week. The date of onset of the most recent cVDPV3 is 7 September.
 - b. 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.

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.

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.
 - Djibouti is missing both indicators. Djibouti, did not report any AFP case since April 2017.
 - Morocco has a percentage of AFP cases with adequate stool specimens of 70.3%
 - Oman has a percentage of AFP cases with adequate stool specimens of 77.3%
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

22-Oct-18

Week 42, ending 21 October 2018

Number 1046

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

Country	Reported AFP cases by week of onset - Week (42/18) / Ending on : 21/10/2018														
	Total AFP 2016	Total AFP 2017	Total AFP to date, 2018	W31 05 Aug 18	W32 12 Aug 18	W33 19 Aug 18	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
Afghanistan	2905	3094	2650	72	52	32	50	65	53	79	71	71	78	22	
Bahrain	14	18	24	0	1	1	0	1	1	0	0	1	0	0	
Djibouti	3	4	0	0	0	0	0	0	0	0					
Egypt	1092	1242	1000	21	22	11	21	21	20	28	31	19	26	15	
Iran	776	820	668	21	23	11	13	13	24	14	11	17	8	1	
Iraq	605	699	751	13	13	6	14	13	20	25	20	9	15	9	
Jordan ****	107	116	105	2	1	0	0	1	4	3	1	2	1	3	
Kuwait	50	69	50	1	1	0	1	0	0	1	0	0	2	1	0
Lebanon ****	111	75	71	2	2	2	2	1	0	2	3	1	0	1	
Libya	70	88	103	6	2	1	5	5	4	3	2	4	1	0	
Morocco	84	143	145	1	2	3	2	1	6	2	6	6	2		
Oman	39	40	22	1	0	0	0	1	1	1	1	2	1	0	
Pakistan	7848	10319	9009	254	245	178	216	241	244	199	257	216	176	87	
Palestine ****	46	43	37	1	0	3	0	1	1	1	1	0	0	0	
Qatar	9	18	9	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	273	276	152	4	3	1	2	6	5	3	2	3	0	0	
Somalia	316	345	285	7	6	3	7	14	10	6	10	7	8	0	0
Sudan	509	570	471	13	6	5	7	15	11	11	19	15	12	3	0
Syria ****	303	362	278	11	3	1	5	4	4	8	4	4	7	9	2
Tunisia	90	67	57	1	0	2	2	1	0	0	0	1	1	0	
U.A.E	42	58	34	0	0	1	1	1	0	1	0	0	1	0	
Yemen	715	713	530	19	11	8	9	14	12	8	7	10	9	6	
Total EMR	16007	19179	16451	450	393	269	357	419	420	395	446	388	348	157	2

□ No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2016	Total year 2017	21/10		Confirmed polio cases by month of onset											
			2017	2018	November 2017	December 2017	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018
Afghanistan	13	14	10	16	2	2	3	3	1	1	0	2	3	2	1	
Bahrain	0	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	0	
Iran	0	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	0	
Jordan ****	0	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	0	
Lebanon ****	0	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	0	
Morocco	0	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	0	
Pakistan	20	8	5	6	3	0	0	0	1	1	1	0	0	1	2	
Palestine ****	0	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	0	
Somalia	0	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	0	
Syria ****	0	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	0	
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Yemen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total EMR	33	22	15	22	5	2	3	3	2	2	1	2	3	3	3	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 (42/18) / Ending on : 21/10/2018

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	2650	16	0	206	2428	0	16.2	15	1	94.5	16	0	18/10/2018
Bahrain	18	0	0	0	18	0	6.2	0	0	100.0	0	0	24	0	0	6	18	0	10.3	1	0	95.8	0	0	18/10/2018
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	1000	0	0	113	887	0	3.2	9	0	90.1	0	0	18/10/2018
Iran	820	0	0	0	820	0	4.3	0	0	96.7	0	0	668	0	0	28	639	1	4.3	0	0	97.0	0	0	20/10/2018
Iraq	699	0	0	0	699	0	4.7	0	0	86.7	0	0	751	0	0	66	685	0	6.1	11	1	89.5	0	0	19/10/2018
Jordan	116	0	0	0	116	0	4.2	0	0	100.0	0	0	105	0	0	4	101	0	4.6	0	0	100.0	0	0	18/10/2018
Kuwait	69	0	0	0	69	0	7.5	0	0	92.8	0	0	50	0	0	3	47	0	7.0	0	0	88.0	0	0	21/10/2018
Lebanon	75	0	0	0	75	0	4.0	0	0	80.0	0	0	71	0	0	3	68	0	4.8	0	0	97.2	0	0	19/10/2018
Libya	88	0	0	0	88	0	4.3	0	0	96.6	0	0	103	0	0	10	93	0	5.1	1	1	96.1	0	0	20/10/2018
Morocco	143	0	0	0	143	0	1.3	0	0	67.1	0	0	145	0	0	49	96	0	2.0	21	0	70.3	0	0	12/10/2018
Oman	40	0	0	0	40	0	4.5	0	0	90.0	0	0	22	0	0	3	19	0	3.2	0	0	77.3	0	0	14/10/2018
Pakistan	10319	8	2	0	10309	0	13.2	0	0	85.6	8	0	9009	6	1	623	8379	0	14.3	91	0	88.2	6	0	20/10/2018
Palestine	43	0	0	0	43	0	2.3	0	0	97.7	0	0	37	0	0	8	29	0	2.4	1	0	91.9	0	0	14/10/2018
Qatar	18	0	0	0	18	0	6.1	0	0	100.0	0	0	9	0	0	0	9	0	3.1	0	0	100.0	0	0	21/10/2017
Saudi Arabia	276	0	0	0	276	0	3.5	0	0	98.9	0	0	152	0	0	40	112	0	2.3	10	0	95.4	0	0	18/10/2018
Somalia	345	0	0	1	344	0	6.0	1	1	99.1	0	0	285	0	0	17	256	12	5.6	2	2	97.9	0	0	21/10/2018
Sudan	570	0	0	0	570	0	3.2	0	0	96.3	0	0	471	0	0	21	450	0	3.2	2	0	97.7	0	0	21/10/2018
Syria	362	0	1	0	287	74	4.7	0	0	80.9	0	0	278	0	0	25	253	0	4.5	0	0	87.1	0	0	21/10/2018
Tunisia	67	0	0	0	67	0	2.5	0	0	74.6	0	0	57	0	0	9	48	0	2.7	1	1	80.7	0	0	19/10/2018
U.A.E	58	0	0	0	58	0	5.7	0	0	98.3	0	0	34	0	0	5	29	0	3.4	0	0	97.1	0	0	20/10/2018
Yemen	713	0	0	73	640	0	5.2	73	58	90.2	0	0	530	0	0	462	68	0	4.7	346	324	93.2	0	0	20/10/2018
EMR	19179	22	3	74	19004	76	7.7	74	59	88.9	22	0	16451	22	1	1701	14714	13	8.2	511	330	90.4	22	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



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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	764	4	0	39	154	50
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	370	0	0	10	45	24
IRN	143	0	0	5	1	0	121	0	0	2	5	0
IRQ	698	0	0	18	101	16	619	0	0	17	76	48
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	203	0	0	3	15	23
LIB	4	0	0	0	0	1	0	0	0	0	0	0
MOR	87	0	0	0	7	0	75	0	0	0	8	9
OMA	115	0	0	1	24	1	51	0	0	1	10	0
PAK	3758	2	0	234	897	0	3253	1	0	135	714	134
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	4	848	0	10	32	89	92
SUD	385	0	0	6	32	46	293	0	0	2	22	92
SYR	570	0	63	3	11	0	526	0	0	3	9	31
TUN	26	0	0	0	0	0	13	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	1105	0	0	0	0	1105
EMR	10538	3	63	446	1713	776	8248	5	10	244	1147	1614

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	1	08-05-18
2018 Total		5	07-08-18
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	BALOCHISTAN	DUKKI	1	15-04-18	15-04-18
	2018 Total			3	15-04-18	17-07-18
2017	AFG	HILMAND	NAWZAD	1	16-04-17	16-04-17
	2017 Total			1	16-04-17	16-04-17



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Table 5: Laboratory investigation of AFP cases with paralysis onset in 2018 up to Week (42/18) / Ending on : (22/10/2018)

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	2612	190	20	479	1802	121			14	146								2	17%	89%	100%	98%	20/10/2018		
Bahrain	NPL Oman / CDC	23			1	22														4%	100%		48%	15/10/2018		
Djibouti	NPL Kenya / CDC																							16/09/2018		
Egypt***	RRL Egypt	977	26	6	132	771	42			14									6	12%	94%	100%	99%	18/10/2018		
Iran	NPL Iran / CDC	690	13		17	634	25	1		7	1									2%	100%	100%	99%	19/10/2018		
Iraq	RRL Egypt	752	17		86	601	35	13		11										12%	100%	100%	76%	18/10/2018		
Jordan	NPL Jordan / RRL EGYPT	104	4		5	92	3			3										7%	100%	100%	100%	18/10/2018		
Kuwait	RRL Kuwait / RIVM	50	1		4	41	3	1											1	6%	96%		98%	18/10/2018		
Lebanon	NPL Jordan / RRL EGYPT	75	2		4	67	1	1		2										8%	100%	100%	50%	18/10/2018		
Libya	RRL Tunisia / RIVM	102	1		11	87	3													10%	100%	100%	98%	19/10/2018		
Morocco	NPL Morocco / RRL Tunisia	131	1		2	120	8													3%	90%	0%	94%	19/10/2018		
Oman	NPL Oman / CDC	21			2	18		1												17%	90%		100%	15/10/2018		
Pakistan	RRL Pakistan	8788	366	40	1888	6145	340	9	5	245									10	19%	90%	99%	97%	20/10/2018		
Palestine & UNRWA		37			6	29		2												17%	60%		100%	14/10/2018		
Qatar	NPL Oman / CDC	9			1	8														11%	88%		100%	15/10/2018		
Saudi Arabia	NPL Saudi Arabia / CDC	152	2		2	143		5												1%	99%	50%	100%	07/10/2018		
Somalia	NPL Kenya / CDC	285	27	1	24	217	2	14		9		4	6 #		9	7 #			1	9%	14%		100%	21/10/2018		
Sudan	NPL Sudan / RRL Egypt	474	5		42	408	19			4					1					11%	95%	100%	83%	20/10/2018		
Syria	NPL Syria / RRL Egypt	276	3		8	245	20			1					2					3%	100%	100%	50%	18/10/2018		
Tunisia	RRL Tunisia	64			2	58	4													2%	98%		97%	19/10/2018		
U.A.E	NPL Oman / CDC	31			4	25		2												12%	86%		90%	15/10/2018		
Yemen	NPL Kenya / CDC																							20/10/2018		
Total EMR 2018		15653	658	67	2720	11533	626	49	19	442	1	4	6		468	7	1	17	4	15%	90%	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

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

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

** This indicator reflects surveillance and laboratory activities

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



Table 6: Environmental isolate by year and type

Country	Status	2015	2016	2017	2018
AFG	NEGATIVE	129	183	274	202
	PENDING				12
	WILD		20	2	42
AFG Total		149	185	316	260
EGY	NEGATIVE	495	528	522	406
	PENDING				24
	VDPV2	3	1		
EGY Total		498	529	522	430
IRN	NEGATIVE			6	38
IRN Total				6	38
JOR	NEGATIVE		2	32	15
	PENDING				13
JOR Total			2	32	28
LEB	NEGATIVE		4	27	10
	PENDING				23
LEB Total			4	27	33
PAK	NEGATIVE	347	462	523	413
	PENDING				39
	WILD	79	59	105	89
	WILD & VDPV2	5	3	1	
	VDPV2	8	5	4	
PAK Total		439	529	633	541
SOM	NEGATIVE			34	133
	PENDING				18
	VDPV2			2	13
	VDPV3				10
SOM Total			36	174	
SYR	NEGATIVE			4	67
	PENDING				6
SYR Total				4	73
Grand Total		1086	1249	1576	1577

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			
	ISLAMABAD	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							
KHIGIQBAL	6	3/Feb	10/Oct							
KP	PESHAWAR	8	10/Jan	11/Dec						
WILD & VDPV2	BALOCHISTAN	KABDULAH	1	15/Jul	15/Jul					
VDPV2	BALOCHISTAN	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	1	8/Jan	8/Jan			
				HERAT	1	25/Jun	25/Jun			
				KABUL	3	26/Feb	26/Jun			
				KANDAHAR	25	8/Jan	25/Sep			
				MATUN	1	25/Sep	25/Sep			
				ASADABAD	2	24/Apr	25/Sep			
				BEHSUD	2	28/Jan	25/Feb			
				JALALABAD	11	27/Jan	25/Jul			
				AFG Total	46	8/Jan	25/Sep			
				PAK	WILD	BALOCHISTAN	LORALAI	2	17/Mar	17/Aug
	QUETTA	7	13/Feb				20/Sep			
	KABDULAH	4	1/Jan				1/Oct			
	ISLAMABAD	CDA	5				10/Jan	10/Sep		
	PUNJAB	LAHORE	5				11/Jun	12/Sep		
	RAWALPINDI	9	10/Jan				10/Sep			
	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	11	15/Feb				11/Sep			
	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			
	KHIGIQBAL	1	13/Sep				13/Sep			
	FATA	BAJOUR	4				19/May	24/Sep		
	KHYBER PAKHTUNKHWA	BANNU	1				31/Mar	31/Mar		
	KOHAT	5	5/Jan	27/Sep						
NOWSHERA	1	18/Sep	18/Sep							
PESHAWAR	15	10/Jan	24/Sep							
PAK Total	89	1/Jan	1/Oct							
SOM	VDPV2	BANADIR	HAMAR WEYN	8	4/Jan	6/Sep				
			HODAN	1	22/Feb	22/Feb				
			WABERI	4	1/Mar	2/Aug				
			HAMAR WEYN	5	8/Mar	5/Apr				
			WABERI	5	8/Mar	23/Aug				
SOM Total	23	4/Jan	6/Sep							
2018 Total				158	1/Jan	1/Oct				



Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2018 - 21/10/2018

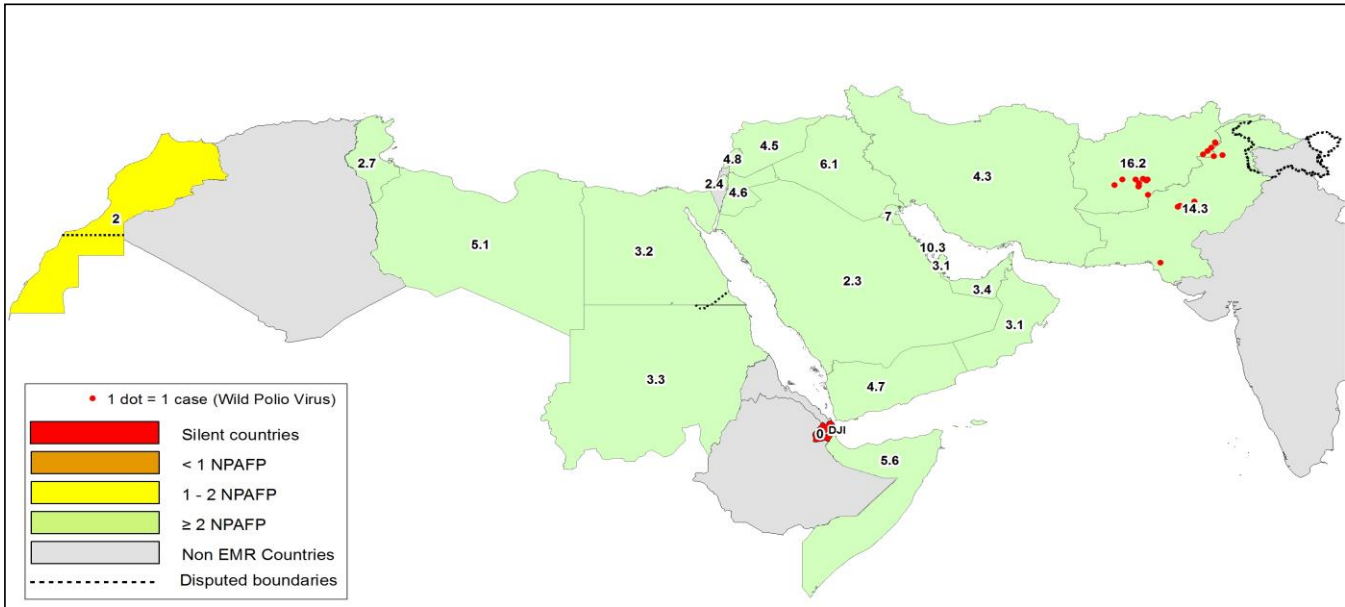


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2018 - 21/10/2018

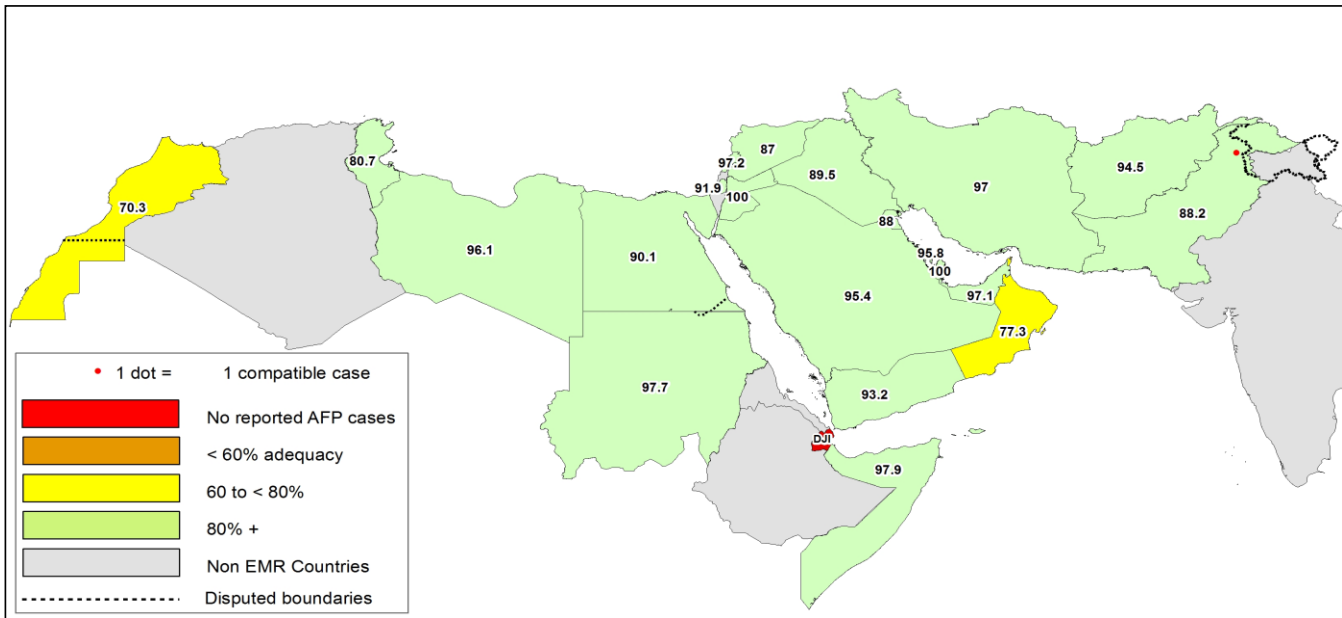


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2017 - 2018

Year	COUNTRY	P1		
		Count	First Case	Last Case
2018	AFG	16	1/1/2018	9/1/2018
	PAK	6	3/8/2018	9/25/2018
2018 Total		22	1/1/2018	9/25/2018
2017	AFG	14	1/13/2017	12/28/2017
	PAK	8	1/28/2017	11/15/2017
2017 Total		22	1/13/2017	12/28/2017

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 - 21/10/2018

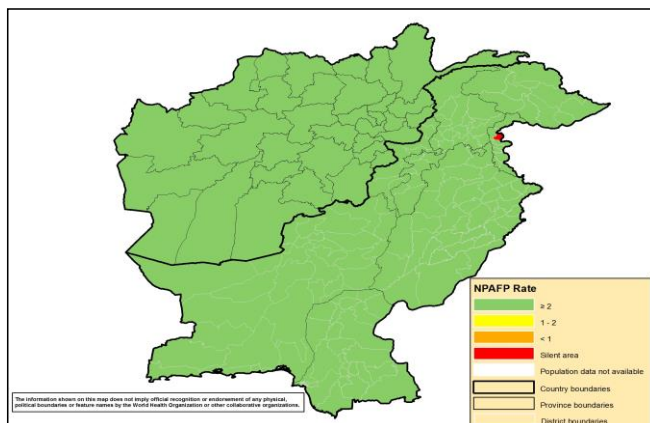


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2018 - 21/10/2018

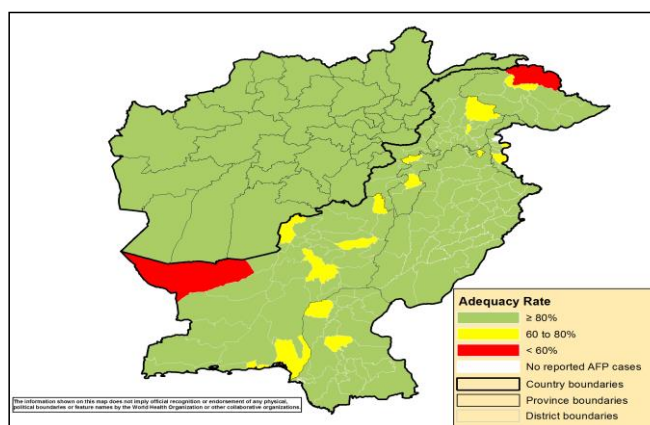
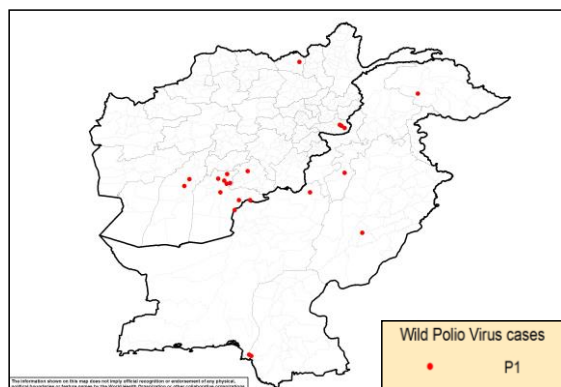
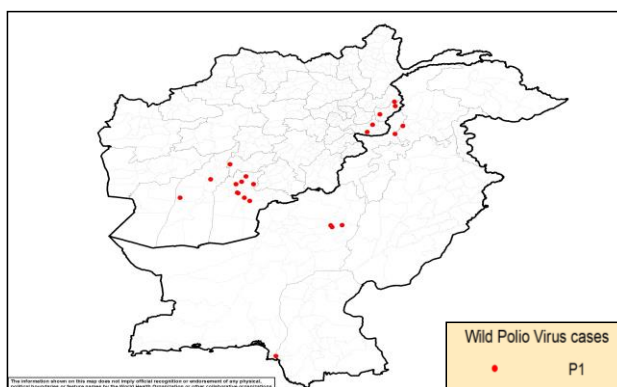


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5b: 01/01/2018 - 21/10/2018





ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	HILMAND	NAWZAD	1	1-Sep-18	1-Sep-18
		NAD-E-ALI	1	1-Jun-18	1-Jun-18
	KANDAHAR	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			16	1-Jan-18	1-Sep-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	KHYBER	1	25-Sep-18	25-Sep-18
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18
	KHYBER PAKHTOON	CHARSADA	1	1-Aug-18	1-Aug-18
	BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18
2018 Total			6	8-Mar-18	25-Sep-18
2017	BALUCHISTAN	ZHOB	1	15-Nov-17	15-Nov-17
		KABDULAH	2	11-Jun-17	13-Nov-17
	SINDH	KHIGADAP	1	9-Nov-17	9-Nov-17
		KHIGIQBAL	1	11-Aug-17	11-Aug-17
	KHYBER PAKHTOON	LAKKIMRWT	1	21-Aug-17	21-Aug-17
	GILGIT BALTISTAN	DIAMER	1	13-Feb-17	13-Feb-17
PUNJAB	LODHRAN	1	28-Jan-17	28-Jan-17	
2017 Total			8	28-Jan-17	15-Nov-17

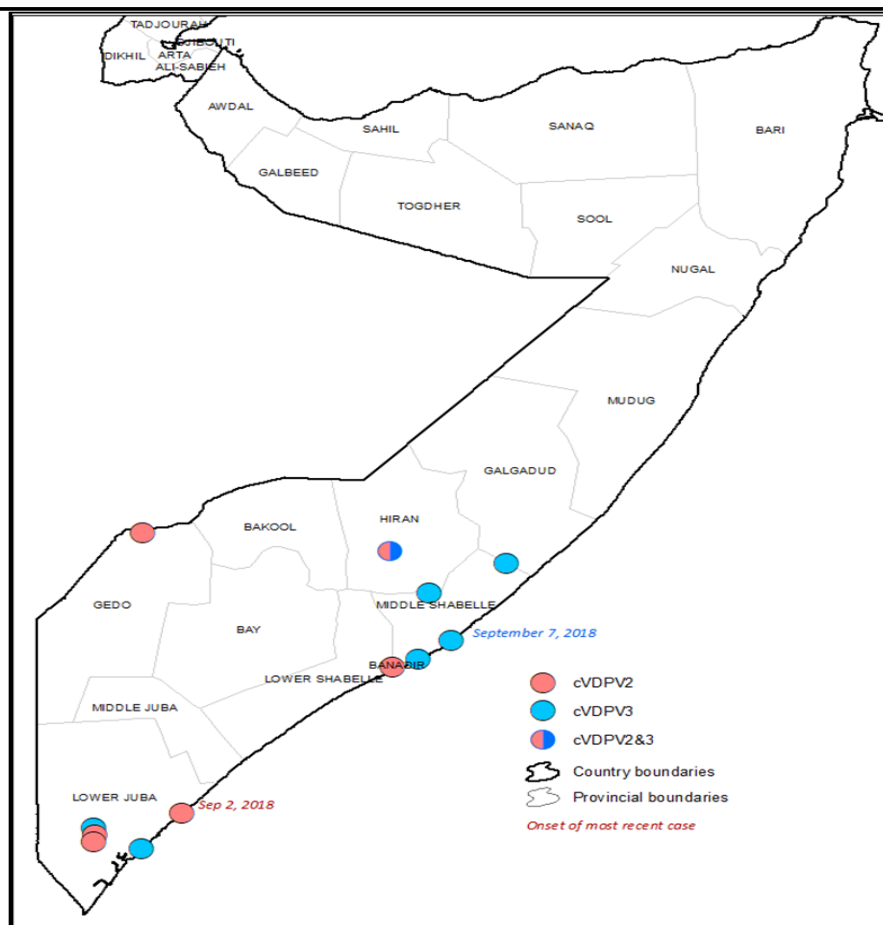


Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2017-2018

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					
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

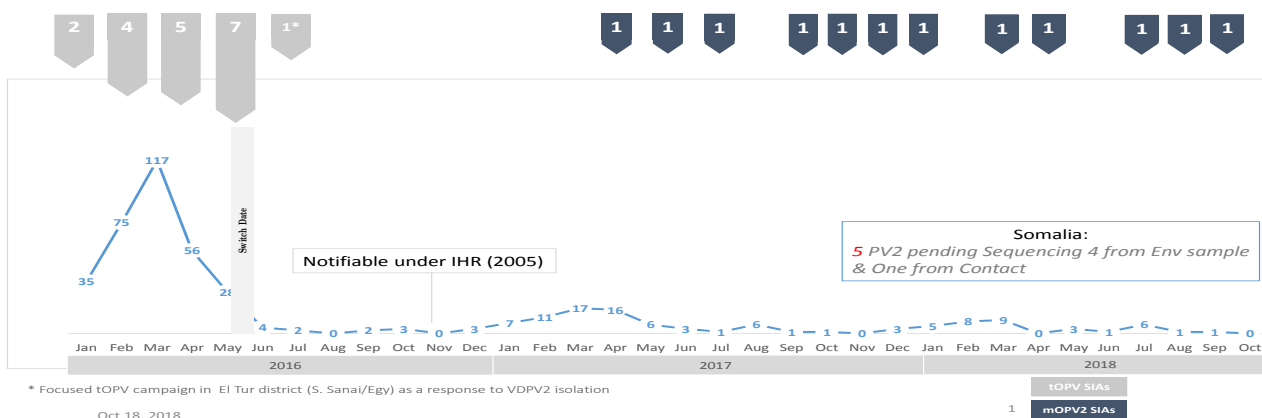
Somalia in 2018 so far has a total of 12 cVDPV cases (5 cVDPV2, 6 cVDPV3 & 1 coinfection cVDPV2/cVDPV3)

Figure 6: Somalia cVDPV cases by type and district 01/01/2018 - 21/10/2018

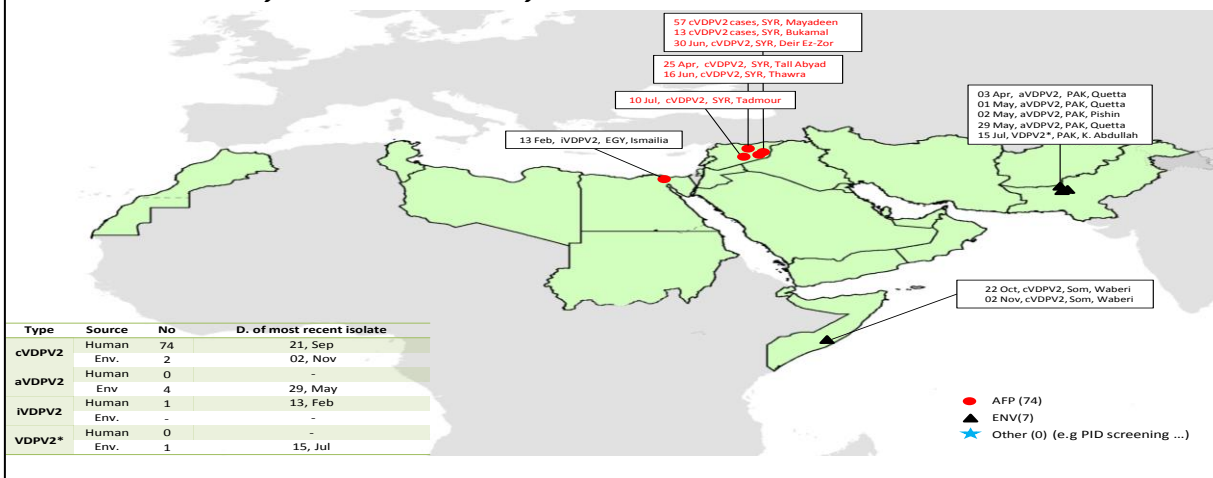




Sabin Like Type-2 Poliovirus Isolates (H & E) EMR, 2016-17-18



VDPV2 isolates, EMR countries, 2017



VDPV2 isolates, EMR countries, 2018

