

Highlights of Polio Fax Bulletin No. 1052 for Week 48 2018

I. Poliovirus Transmission

1. Endemic countries (PAKISTAN & AFGHANISTAN):

- a. Human samples: One new wild poliovirus type-1 (WPV1) case was reported this week. Total WPV1 cases for 2018 to date are 28 cases (20 from Afghanistan and 8 from Pakistan).
 - i. Afghanistan: One new WPV1 case reported this week from Afghanistan. The new case is of a 36-month old male child from Shahid-E-Hassas district, Uruzgan province with date of onset of paralysis 9 October 2018. The case has received no doses of oral polio vaccine due to reported refusal of parents. The family lives in an area which is not accessible for vaccination due to insecurity. The total number of WPV1 cases in Afghanistan in 2018 to date is currently 20 from six provinces (Hilmand-3 cases, Kandhar-9 cases, Kunar-3 cases, Nangarhar-2 cases, Uruzgan-2 cases and Nuristan-1 case). The most recent reported case has date of onset of paralysis on 9 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: Fourteen new positive environmental samples for WPV1 reported this week, which include four from Afghanistan and ten from Pakistan.
 - i. Afghanistan: Four new positive environmental samples reported this week which include three from southern region (two from Kandahar district, Kandahar province and one from Lashkargah district, Hilmand province), and one from eastern region from Jalalabad district, Nangarhar province. The total positive environmental samples from Afghanistan in 2018 to date are 64 with most recent positive sample collected on 5 November 2018.
 - ii. Pakistan: Ten new positive environmental samples reported this week, which include one from Killa Abdulah district, Balochistan province; one from CDA district, Islamabad province; from Punjab province, one from Lahore district and two from Rawalpindi district; from Sindh province, two from Karachi towns (Gadap and Liaqat) and one from Sukkur district; and from Khyber Pakhtunkhwa province one from Mardan district and one from Peshawar. The total positive environmental samples from Pakistan in 2018 to date are 114 with most recent positive sample collected on 15 November 2018.

II. Outbreak response countries

1. SOMALIA:

a. cVDPV2:

- i. No new cVDPV2 cases reported this week. The date of onset of the most recent cVDPV2 case is 2 September 2018.
- ii. A new cVDPV2 positive environmental sample was reported this week. In 2018 so far, cVDPV2 has been isolated from 18 sewage samples in Mogadishu and date of specimen collection of recent most positive sample is 11 October 2018.

b. cVDPV3:

- i. The date of onset of the most recent cVDPV3 case is 7 September, 2018.
- ii. In 2018 so far, cVDPV3 isolated from 12 sewage samples in Mogadishu and date of specimen collection of recent most positive sample is 23 August 2018. One of the above 12 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 70.2%
 - 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 (72). Also Somalia has one pending case from 2017.

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

Country	Reported AFP cases by week of onset - Week (48/18) / Ending on : 02/12/2018														
	Total AFP 2016	Total AFP 2017	Total AFP to date, 2018	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	W47 25 Nov 18	W48 02 Dec 18
Afghanistan	2905	3094	3064	80	73	74	85	50	62	66	75	77	59	31	3
Bahrain	14	18	31	0	0	1	0	0	2	1	1	2	0	1	0
Djibouti	3	4	0	0	0	0	0	0	0	0	0	0			
Egypt	1092	1242	1151	28	31	19	28	33	18	26	16	22	22	24	
Iran	776	820	768	15	13	22	23	17	5	13	17	16	7	2	0
Iraq	605	699	871	25	21	9	17	19	18	14	29	17	19	9	1
Jordan ****	107	116	107	3	1	2	1	3	1	0	1	0	0	0	
Kuwait	50	69	62	1	0	0	2	1	1	3	1	2	3	2	0
Lebanon ****	111	75	77	2	3	1	0	2	1	1	0	2	1		
Libya	70	88	110	3	2	4	1	1	2	2	0	0	1	1	
Morocco	84	143	188	2	6	8	5	4	8	5	4	3	6	3	
Oman	39	40	26	1	1	3	1	1	1	0	1	0	0	0	0
Pakistan	7849	10330	10439	206	267	236	200	268	231	218	223	264	174	42	0
Palestine ****	46	43	41	1	1	0	1	1	1	0	0	0	1	0	0
Qatar	9	18	9	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	273	276	196	3	2	5	3	3	7	5	8	12	4	0	0
Somalia	316	345	323	6	10	7	10	4	6	7	4	7	6	2	0
Sudan	509	570	535	11	20	15	12	7	10	11	11	13	9	5	0
Syria ****	303	362	317	9	4	5	7	12	6	5	8	6	7	3	1
Tunisia	90	67	62	0	0	2	2	0	0	1	1	1	0	0	
U.A.E	42	58	37	1	0	0	1	1	0	0	1	1	0	0	
Yemen	715	713	631	8	7	10	15	13	21	23	20	15	8	1	
Total EMR	16008	19190	19045	405	462	423	414	440	401	401	421	460	327	126	5

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2016	Total year 2017	02/12		Confirmed polio cases by month of onset											
			2017	2018	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018
Afghanistan	13	14	12	20	3	3	1	1	0	2	3	2	3	2		
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		
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	0	
Pakistan	20	8	8	8	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		
Yemen	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total EMR	33	22	20	28	3	3	2	2	1	2	3	3	6	3	0	0

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

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Table 3: Investigation of AFP cases with paralysis onset in 2017 & 2018 up to Week (48/18) / Ending on : 02/12/2018)

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	3064	20	0	276	2768	0	16.3	21	2	94.0	20	0	02/12/2018		
Bahrain	18	0	0	0	18	0	6.2	0	0	100.0	0	0	31	0	0	13	18	0	11.6	4	0	96.8	0	0	02/12/2018		
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	1151	0	0	94	1057	1	3.3	7	0	90.9	0	0	29/11/2018		
Iran	820	0	0	0	820	0	4.3	0	0	96.7	0	0	768	0	0	9	758	1	4.3	0	0	96.9	0	0	02/12/2018		
Iraq	699	0	0	0	699	0	4.7	0	0	86.7	0	0	871	0	0	82	789	0	6.2	11	0	90.2	0	0	02/12/2018		
Jordan	116	0	0	0	116	0	4.2	0	0	100.0	0	0	107	0	0	0	107	0	4.1	0	0	100.0	0	0	29/11/2018		
Kuwait	69	0	0	0	69	0	7.5	0	0	92.8	0	0	62	0	0	6	56	0	7.6	0	0	88.7	0	0	02/12/2018		
Lebanon	75	0	0	0	75	0	4.0	0	0	80.0	0	0	77	0	0	6	71	0	4.5	0	0	97.4	0	0	23/11/2018		
Libya	88	0	0	0	88	0	4.3	0	0	96.6	0	0	110	0	0	2	108	0	4.8	0	0	96.4	0	0	01/12/2018		
Morocco	143	0	0	0	143	0	1.3	0	0	67.1	0	0	188	0	0	72	116	0	2.3	25	0	70.2	0	0	30/11/2018		
Oman	40	0	0	0	40	0	4.5	0	0	90.0	0	0	26	0	0	0	26	0	3.3	0	0	73.1	0	0	02/12/2018		
Pakistan	10330	8	2	5	10315	0	13.2	0	0	85.6	8	0	10439	8	1	655	9775	0	14.5	120	0	88.4	8	0	02/12/2018		
Palestine	43	0	0	0	43	0	2.3	0	0	97.7	0	0	41	0	0	7	34	0	2.4	1	0	92.7	0	0	02/12/2018		
Qatar	18	0	0	0	18	0	6.1	0	0	100.0	0	0	9	0	0	0	9	0	2.7	0	0	100.0	0	0	02/12/2017		
Saudi Arabia	276	0	0	0	276	0	3.5	0	0	98.9	0	0	196	0	0	54	142	0	2.6	2	0	95.4	0	0	02/12/2018		
Somalia	345	0	0	1	344	0	6.0	1	1	99.1	0	0	323	0	0	17	294	12	5.5	1	1	98.1	0	0	02/12/2018		
Sudan	570	0	0	0	570	0	3.2	0	0	96.3	0	0	535	0	0	20	515	0	3.2	0	0	97.6	0	0	02/12/2018		
Syria	362	0	1	0	287	74	4.7	0	0	80.9	0	0	317	0	0	18	299	0	4.5	0	0	88.0	0	0	01/12/2018		
Tunisia	67	0	0	0	67	0	2.5	0	0	74.6	0	0	62	0	0	4	58	0	2.5	1	1	80.6	0	0	30/11/2018		
U.A.E	58	0	0	0	58	0	5.7	0	0	98.3	0	0	37	0	0	2	35	0	3.2	0	0	97.3	0	0	29/11/2018		
Yemen	713	0	0	72	641	0	5.2	72	58	90.2	0	0	631	0	0	562	69	0	4.9	409	384	92.6	0	0	01/12/2018		
EMR	19190	22	3	78	19011	76	7.7	73	59	88.9	22	0	19045	28	1	1899	17104	14	8.3	602	388	90.5	28	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	1429	1	0	88	347	0	934	4	0	46	196	60
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	453	0	0	11	51	34
IRN	143	0	0	5	1	0	128	0	0	3	5	0
IRQ	698	0	0	18	101	16	692	0	0	19	84	35
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	124	0	0	0	9	15
OMA	115	0	0	1	24	1	68	0	0	2	15	0
PAK	3758	2	0	234	899	0	3708	3	0	149	811	136
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	965	0	10	49	112	49
SUD	385	0	0	6	32	46	323	0	0	2	24	106
SYR	570	0	63	3	11	0	599	0		7	13	24
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	1350	0	0	0	0	1350
EMR	10543	3	63	446	1715	775	9573	7	10	291	1335	1836

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	01-09-18
2017	AFG	HILMAND	NAWZAD	1	16-04-17	16-04-17
	2017 Total				1	16-04-17

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Table 5: Laboratory investigation of AFP cases with paralysis onset in 2018 up to Week (48/18) / Ending on : (02/12/2018)

Country	Polio laboratories ITD / Nucleotide Sequencing (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			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	NPEV only	Negative	received < / = 14 days	received > 14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin									
Afghanistan	RRL Pakistan	3004	211	22	566	2096	109		18	160										17%	90%	100%	98%	02/12/2018	
Bahrain	NPL Oman / CDC	24			1	23														4%	100%		50%	26/11/2018	
Djibouti	NPL Kenya / CDC																							14/11/2018	
Egypt***	RRL Egypt	1105	33	6	146	884	28	8	16	1					18		8	1		12%	95%	100%	99%	29/11/2018	
Iran	NPL Iran / CDC	776	16		22	721	16	1	11	1					8					2%	100%	100%	99%	01/12/2018	
Iraq	RRL Egypt	877	17		101	681	45	33	11						12					13%	100%	100%	76%	29/11/2018	
Jordan	NPL Jordan / RRL EGYPT	107	4		6	97			3						4					8%	100%	100%	100%	29/11/2018	
Kuwait	RRL Kuwait / RIVM	59	1		4	50	1	3										1		6%	96%		98%	25/11/2018	
Lebanon	NPL Jordan / RRL EGYPT	82	2		6	71	2	1	2						2					9%	100%	100%	50%	29/11/2018	
Libya	RRL Tunisia / RIVM	109	1		11	95	2								1					10%	100%	100%	97%	30/11/2018	
Morocco	NPL Morocco / RRL Tunisia	162	2		4	152	4								2					3%	92%	0%	94%	30/11/2018	
Oman	NPL Oman / CDC	26			5	21														22%	92%		100%	26/11/2018	
Pakistan	RRL Pakistan	10270	413	48	2200	7221	377	8	6	274					317	1	10			18%	92%	99%	97%	02/12/2018	
Palestine & UNRWA		41			6	32		3												16%	61%		100%	02/12/2018	
Qatar	NPL Oman / CDC	9			1	8														11%	88%		100%	26/11/2018	
Saudi Arabia	NPL Saudi Arabia / CDC	211	2		6	177	22	5							2					2%	96%	50%	100%	02/12/2018	
Somalia	NPL Kenya / CDC	323	36	2	30	239	6	10	16		5	6		14	7			2		10%	14%		100%	02/12/2018	
Sudan	NPL Sudan / RRL Egypt	537	7		50	465	15		5					1			2			11%	96%	100%	83%	02/12/2018	
Syria	NPL Syria / RRL Egypt	316	6		11	285	10	4	1					1						4%	100%	100%	33%	29/11/2018	
Tunisia	RRL Tunisia	67			2	64	1													2%	98%		97%	30/11/2018	
U.A.E	NPL Oman / CDC	38			4	32	2													10%	89%		83%	26/11/2018	
Yemen	NPL Kenya / CDC																							01/12/2018	
Total EMR 2018		18143	751	78	3182	13414	640	76	24	499	2	5	6	526	7	1	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	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	223
	PENDING				14
	WILD	20	2	42	64
AFG Total		149	185	316	301
EGY	NEGATIVE	495	528	522	467
	PENDING				21
	VDPV2	3	1		
EGY Total		498	529	522	488
IRN	NEGATIVE			6	44
				6	44
JOR	NEGATIVE		2	32	17
	PENDING				16
JOR Total			2	32	33
LEB	NEGATIVE		4	27	10
	PENDING				27
LEB Total			4	27	37
PAK	NEGATIVE	347	462	523	476
	PENDING				23
	WILD	79	59	105	114
	WILD & VDPV2	5	3	1	
	VDPV2	8	5	4	
PAK Total		439	529	633	613
SOM	NEGATIVE			34	154
	PENDING				20
	VDPV2			2	20
	VDPV3				12
SOM Total				36	206
SYR	NEGATIVE			4	82
	PENDING				4
SYR Total				4	18
Grand Total		1086	1249	1576	1808

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			
				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	5	10/Feb				10/Jul			
	PUNJAB	1	18/Dec				18/Dec			
	LAHORE	1	9/Jan				9/Jan			
	MULTAN	1	9/Jan				9/Jan			
	RAWALPINDI	8	10/Jan				10/Oct			
	SINDH	4	11/Aug				13/Dec			
	JACOBABAD	1	15/Aug				15/Aug			
	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							
KHIMALUR	6	3/Feb	10/Oct							
PESHAWAR	8	10/Jan	11/Dec							
WILD & VDPV2	BALOCHISTAN	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	5	8/Jan	5/Nov			
				HIRAT	1	25/Jun	25/Jun			
				KABUL	3	26/Feb	26/Jun			
				KANDAHAR	34	8/Jan	5/Nov			
				KHOST	1	25/Sep	25/Sep			
				KUNAR	2	24/Apr	25/Sep			
				BEHSUD	3	28/Jan	25/Oct			
				JALALABAD	15	27/Jan	25/Oct			
				AFG Total				64	8/Jan	5/Nov
				PAK	WILD	BALOCHISTAN	LORALAI	2	17/Mar	17/Aug
	QUETTA	9	13/Feb				20/Oct			
	KABDULAH	5	1/Jan				1/Nov			
	ISLAMABAD	7	10/Jan				10/Nov			
	PUNJAB	9	11/Jun				12/Nov			
	RAWALPINDI	13	10/Jan				10/Nov			
	DGKHAN	2	12/Feb				12/Sep			
	HYDERABAD	1	9/Feb				9/Feb			
	SINDH	3	12/Feb				12/Sep			
	JACOBABAD	3	7/Apr				9/Jul			
	KAMBAR	2	1/Aug				4/Sep			
	KHIBALDIA	13	15/Feb				13/Nov			
	KHIGADAP	3	10/Jan				30/Jul			
	KHILANDHI	2	1/Jan	3/Sep						
KHISITE	2	8/Feb	9/Nov							
SUKKUR	2	7/Mar	7/Nov							
KHILIAQAT	1	10/Sep	10/Sep							
KHISADDAR	1	13/Sep	13/Sep							
KHIMALUR	5	19/May	25/Oct							
BAJOUR	2	31/Mar	26/Oct							
KOHAT	5	5/Jan	27/Sep							
MARDAN	2	15/Oct	15/Nov							
NOWSHERA	2	18/Sep	18/Oct							
PESHAWAR	18	10/Jan	10/Nov							
PAK Total				114	1/Jan	15/Nov				
SOM	VDPV2	BANADIR	HAMAR WEYN	11	4/Jan	20/Sep				
			HODAN	2	22/Feb	4/Oct				
			WABERI	7	10/May	11/Oct				
			VDPV3	6	11/Feb	5/Apr				
			HODAN	1	1/Feb	1/Feb				
WABERI	5	8/Mar	23/Aug							
SOM Total				32	4/Jan	11/Oct				
2018 Total				210	1/Jan	15/Nov				

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2018 - 02/12/2018

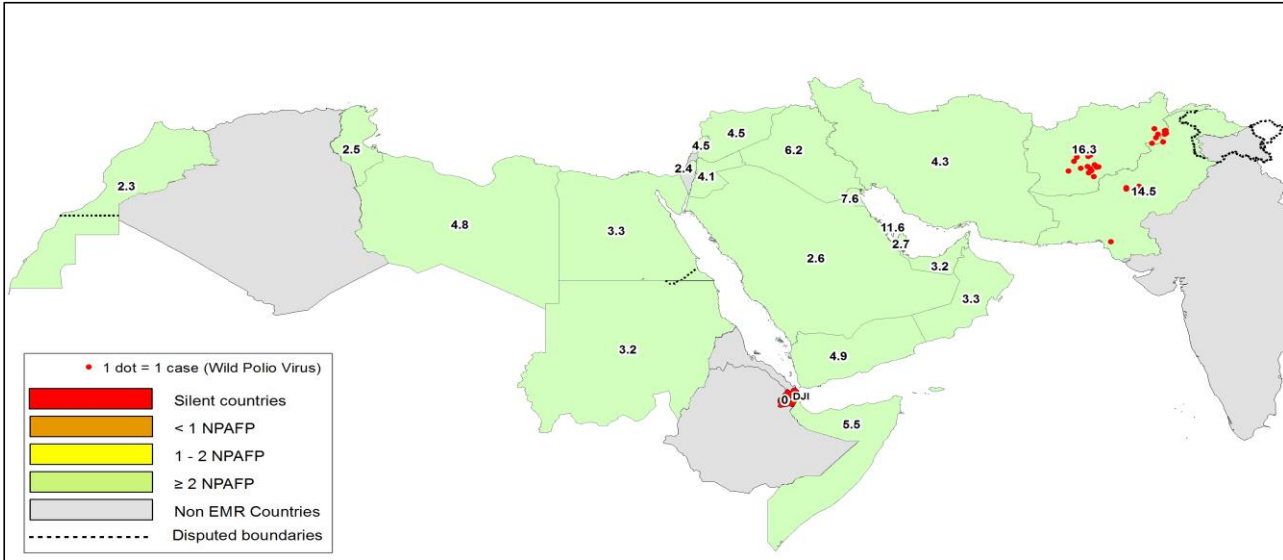


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2018 - 02/12/2018

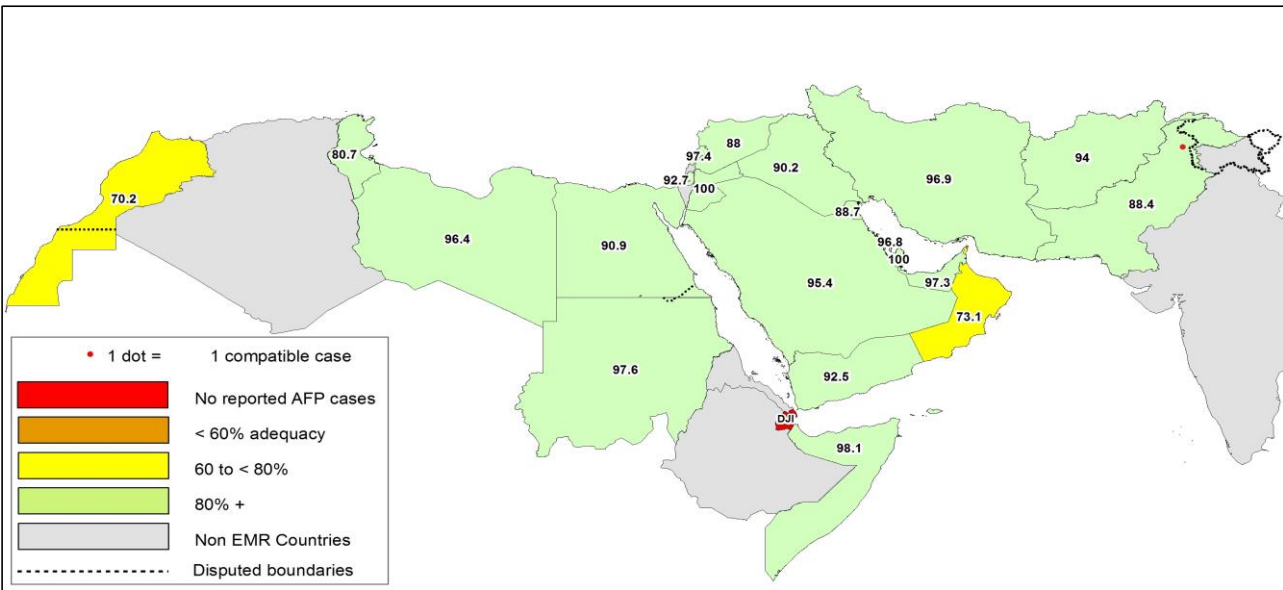


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2017 - 2018

Year	COUNTRY	Count	First Case	Last Case
2018	AFG	20	1-Jan-18	9-Oct-18
	PAK	8	8-Mar-18	7-Oct-18
2018 Total		28	1-Jan-18	9-Oct-18
2017	AFG	14	13-Jan-17	28-Dec-17
	PAK	8	28-Jan-17	15-Nov-17
2017 Total		22	13-Jan-17	28-Dec-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 - 02/12/2018

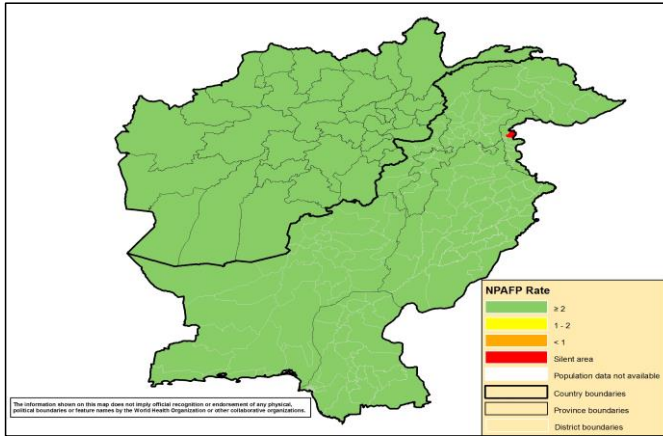


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2018 -02/12/2018

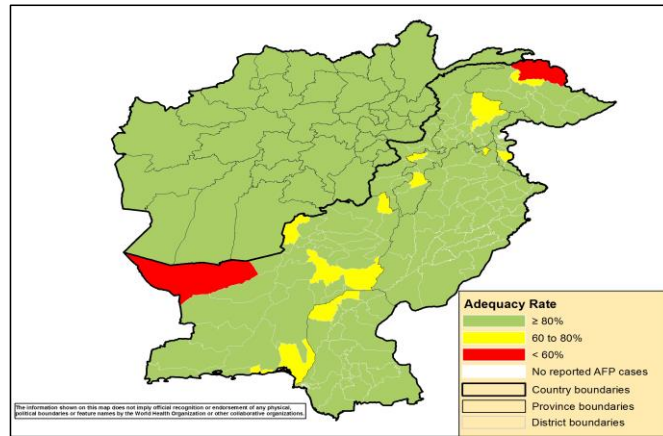
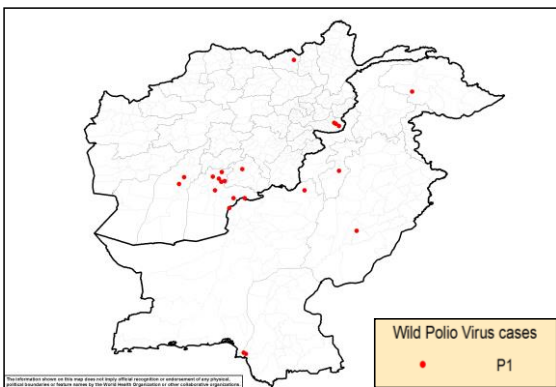
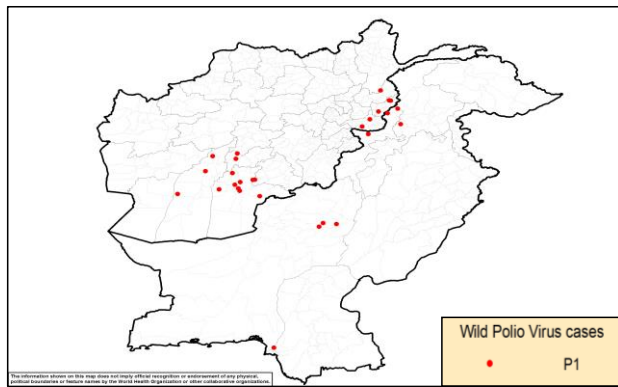


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5b: 01/01/2018 - 02/12/2018



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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	URUZGAN	SHAHID-E-HASSAS	2	8-Jul-18	9-Oct-18
		HILMAND	2	1-Sep-18	2-Oct-18
	HILMAND	NAWZAD	1	1-Jun-18	1-Jun-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
	KAMA		1	1-Jan-18	1-Jan-18
	KUNAR	CHAWKAY	1	22-Jun-18	22-Jun-18
GHAZIABAD		2	14-Feb-18	3-Mar-18	
2018 Total			20	1-Jan-18	9-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

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	1-Sep-18	7-Oct-18
		KHYBER	1	25-Sep-18	25-Sep-18
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18
	KHYBER PAKHTOONKHWA	CHARSADA	1	1-Aug-18	1-Aug-18
	BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18
2018 Total			8	8-Mar-18	7-Oct-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 PAKHTOONKHWA	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

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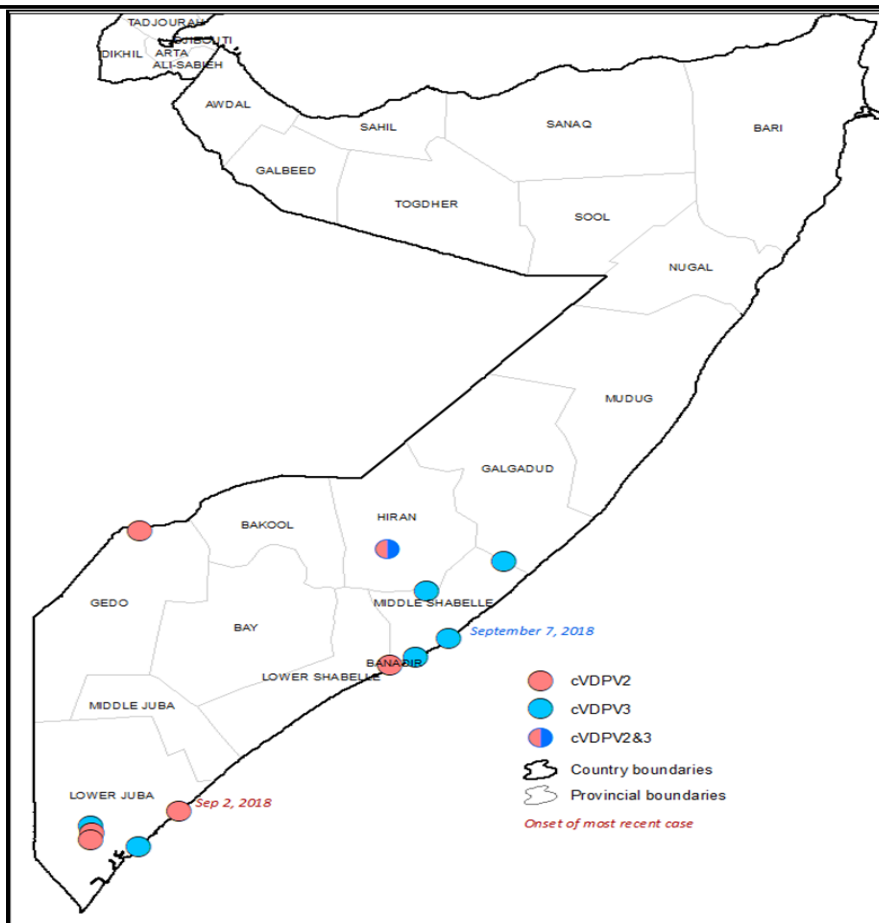
3-Dec-18
 Number 1052

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
		WARSHAIKH				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)

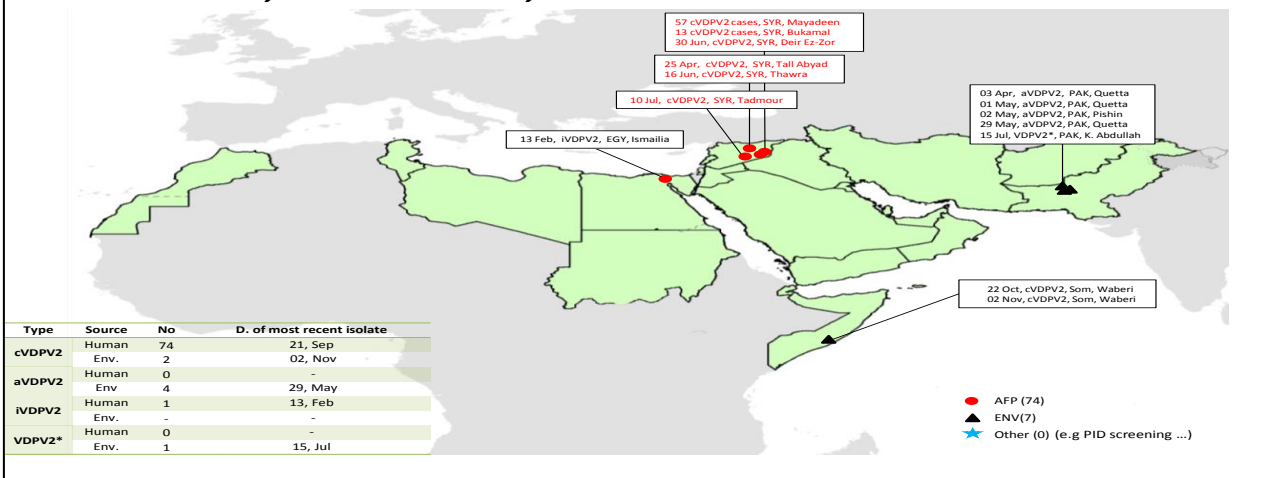
Figure 6: Somalia cVDPV cases by type and district 01/01/2018 - 02/12/2018



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



VDPV2 isolates, EMR countries, 2017



VDPV2 isolates, EMR countries, 2018

