

Highlights of Polio Fax Bulletin No. 1079 for Week 23 2019

I. Poliovirus Transmission

1. **Endemic countries (PAKISTAN & AFGHANISTAN):** One new wild poliovirus type-1 (WPV1) from Pakistan was reported this week. No new positive environmental samples reported this week.
 - a. *Human samples:* One new WPV1 case reported this week from Pakistan. Total WPV1 cases in 2019 to date are 30 (8 from Afghanistan and 22 from Pakistan). This compares with 12 cases in 2018 in the same period (Afghanistan – 9 and Pakistan – 3).
 - i. Afghanistan:
 - In 2019 to date, 8 WPV1 cases are reported. They include three cases from Hilmand, two each from Kandahar and Uruzgan provinces and one from Kunar province. The most recent case has onset of paralysis on 8 May 2019.
 - ii. Pakistan:
 - The new WPV1 case is a 17-month old female child from North Waziristan district, Khyber Pakhtunkhwa Tribal Districts (KPTD). She has onset of paralysis on 3 May 2019 and reportedly received 7 doses of oral polio vaccine (OPV) all from supplementary immunization activities (SIAs) and none from routine.
 - In 2019 to date, 22 WPV1 cases reported from Pakistan. They include nine from KP, seven from KPTD, three each from Punjab and Sindh. The most recent reported case has date of onset of paralysis on 19 May 2019.
 - b. *Environmental samples:* No new wild positive environmental samples were reported this week.
 - i. Afghanistan: In 2019 to date, there are 23 positive environmental samples with most recent positive sample collected on 25 April 2019.
 - ii. Pakistan: In 2019 to date, there are 140 positive environmental samples with most recent positive sample collected on 18 May 2019.

2. Outbreak response countries

SOMALIA:

One new cVDPV2 case was reported this week – no new cVDPV2 environmental samples. No cVDPV3 cases or isolates from human or environmental samples were reported this week.

- A new cVDPV2 case was reported this week from Somalia and it is the third case in 2019. The case was reported from Bossaso district from Bari province, with date of onset 8 May 2019. In 2019 to date, Somalia has reported three cVDPV2 cases. The most recent reported case has date of onset of paralysis on 8 May 2019.
- In 2018:

- Somalia has reported a total of 12 cases due to cVDPVs, which include 5 due to cVDPV2, 6 due to cVDPV3 and 1 due to co-infection of cVDPV2 and cVDPV3. The last cVDPV3 was isolated from a sewage sample from Mogadishu collected on 23 August 2018.

II. Surveillance performance indicators

In 2019, 17 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, did not report any AFP case since April 2017
- b. Morocco has a percentage of AFP cases with adequate stool specimens of 72.3%
- c. Oman has a non-polio AFP rate of 1.8
- d. Qatar has a non-polio AFP rate of 0.6 and percentage of AFP cases with adequate stool specimens of 0%
- e. Tunisia has a non-polio AFP rate of 1.8
- f. In Yemen there are AFP cases pending final classification more than 90 days due to delayed lab results because of delay shipment of specimens to reference polio laboratories.

World Health Organization – Regional Office for Eastern Mediterranean

AFP SURVEILLANCE

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

Country	Reported AFP cases by week of onset - Week (23/19) / Ending on : 09/06/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W12 24 Mar 19	W13 31 Mar 19	W14 07 Apr 19	W15 14 Apr 19	W16 21 Apr 19	W17 28 Apr 19	W18 05 May 19	W19 12 May 19	W20 19 May 19	W21 26 May 19	W22 02 Jun 19	W23 09 Jun 19
Afghanistan	3094	3378	1579	71	75	85	66	55	75	74	66	72	67	24	5
Bahrain	18	35	9	0	1	0	1	0	0	0	1	0	0	1	1
Djibouti	4	0	0	0	0	0									
Egypt	1242	1246	553	23	43	28	25	13	19	20	30	23	21	10	
Iran	820	896	401	8	16	25	23	26	19	19	27	14	2	0	0
Iraq	699	1023	454	15	18	26	19	25	20	11	12	15	14	6	0
Jordan ****	116	115	68	4	4	6	2	3	2	2	4	0	2		
Kuwait	69	72	19	1	0	2	1	0	0	0	0	0	0	1	0
Lebanon ****	75	89	40	1	2	1	5	1	2	1	1	0	1	2	
Libya	88	122	33	1	1	2	1	1	1	2	1	0	2	0	
Morocco	143	212	83	2	6	4	3	5	3	5	3	2			
Oman	40	28	8	0	0	0	1	0	1	1	1	0	0	0	
Pakistan	10319	12275	5333	292	231	221	231	289	264	232	206	237	100	4	0
Palestine ****	43	44	20	2	0	0	1	3	1	1	0	0	0	0	0
Qatar	18	10	1	0	0	0	0	0	0	0	0	0	0		
Saudi Arabia	276	241	122	6	7	4	10	10	4	4	4	4	0	0	
Somalia	345	353	160	14	7	12	6	7	7	8	6	11	6	1	1
Sudan	570	578	188	3	11	15	2	4	10	9	9	0	0		
Syria ****	362	362	173	4	16	7	7	4	5	7	5	6	2	1	
Tunisia	67	68	24	1	0	0	1	1	2	0	0	0	0		
U.A.E	58	40	18	1	0	0	3	0	0	0	1	0	1		
Yemen	713	730	290	11	12	16	16	23	13	9	10	9	1		
Total EMR	19179	21917	9576	460	450	454	424	470	448	405	387	393	219	50	7

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	09/06		Confirmed polio cases by month of onset											
			2018	2019	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	April 2019	May 2019	June 2019
Afghanistan	14	21	9	8	3	2	3	2	1	0	2	1	3	1	1	
Bahrain	0	0	0	0	0	0	0	0	0	0	0					
Djibouti	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				
Iran	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						
Oman	0	0	0	0	0	0	0		0	0	0	0		0	0	
Pakistan	8	12	3	22	0	1	3	1	0	4	4	2	0	11	5	
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		
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		
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	22	33	12	30	3	3	6	3	1	4	6	3	3	12	6	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 2018 & 2019 up to Week (23/19) / Ending on : 09/06/2019

COUNTRY	2018											2019											Latest line List Date		
	AFP									Specimen	Wild cases ****		AFP									Specimen		Wild cases ****	
	Total AFP cases onset 2018	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 2019	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
		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	3378	21	0	0	3357	0	16.6	0	0	93.8	21	0	1579	8	0	215	1356	0	17.7	22	1	94.5	8	0	09-06-2019
Bahrain	35	0	0	2	33	0	12.1	2	0	97.1	0	0	9	0	0	6	3	0	7.1	1	1	88.9	0	0	09-06-2019
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	0	0	0	0	0	0.0	0	0		0	0	10-04-2019	
Egypt	1246	0	0	2	1243	1	3.2	2	0	93.2	0	0	553	0	0	87	466	0	3.3	1	0	90.6	0	0	03-06-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	401	0	0	15	386	0	4.7	0	0	96.3	0	0	09-06-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	454	0	0	73	381	0	6.8	4	0	95.6	0	0	09-06-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	68	0	0	2	66	0	5.6	0	0	98.5	0	0	30-05-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	19	0	0	2	17	0	4.9	0	0	89.5	0	0	09-06-2019
Lebanon	89	0	0	1	88	0	4.8	1	0	96.6	0	0	40	0	0	9	31	0	4.9	3	0	85.0	0	0	07-06-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	33	0	0	4	29	0	3.0	0	0	100.0	0	0	08-06-2019
Morocco	212	0	0	1	211	0	2.4	1	0	77.8	0	0	83	0	0	47	36	0	2.1	29	14	72.3	0	0	17-05-2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	8	0	0	0	8	0	1.8	0	0	87.5	0	0	03-06-2019
Pakistan	12275	12	1	2	12260	0	15.7	2	0	87.0	12	0	5333	22	1	483	4827	0	15.5	94	0	88.8	22	0	09-06-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	20	0	0	6	14	0	2.4	0	0	100.0	0	0	09-06-2019
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	1	0	0	1	0	0	0.6	1	0	0.0	0	0	26-05-2019
Saudi Arabia	241	0	0	0	241	0	3.0	0	0	95.9	0	0	122	0	0	91	31	0	3.4	28	3	90.2	0	0	02-06-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	160	0	0	16	141	3	5.7	0	0	98.1	0	0	09-06-2019
Sudan	578	0	0	0	578	0	3.2	0	0	97.2	0	0	188	0	0	21	167	0	2.4	1	0	97.9	0	0	26-05-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.3	0	0	173	0	0	14	159	0	5.1	3	0	89.0	0	0	08-06-2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	24	0	0	4	19	1	1.8	0	0	83.3	0	0	31-05-2019
U.A.E	40	0	0	2	38	0	3.2	2	1	97.5	0	0	18	0	0	3	15	0	3.3	0	0	83.3	0	0	30-05-2019
Yemen	730	0	0	317	413	0	5.2	317	283	91.6	0	0	290	0	0	287	3	0	4.7	151	136	92.1	0	0	01-06-2019
EMR	21917	33	1	327	21541	15	8.7	327	284	89.8	33	0	9576	30	1	1386	8155	4	8.7	338	155	90.9	30	0	
2017	19179	22	3	72	19006	76	7.7	72	58	88.9	22	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, 2018 - 2019

COUNTRY	2018						2019					
	# OF CONTACTS	LAB RESULTS					# OF CONTACTS	LAB RESULTS				
		WILD	VDPV	SL	NPEV	PENDING		WILD	VDPV	SL	NPEV	PENDING
AFG	1009	4	0	52	217	0	502	1	0	27	91	10
BAH	2	0	0	0	0	0	0	0	0	0	0	0
DJI	0	0	0	0	0	0	0	0	0	0	0	0
EGY	495	0	0	11	58	17	228	0	0	7	15	36
IRN	145	0	0	3	6	0	60	0	0	0	3	0
IRQ	811	0	0	22	93	9	262	0	0	5	6	48
JOR	0	0	0	0	0	0	0	0	0	0	0	0
KUW	0	0	0	0	0	0	0	0	0	0	0	0
LEB	218	0	0	3	16	20	19	0	0	0	3	0
LIB	1	0	0	0	0	0	2	0	0	0	0	0
MOR	161	0	0	0	9	9	30	0	0	1	0	17
OMA	70	0	0	2	16	0	18	0	0	1	8	0
PAK	4209	3	0	207	882	0	2011	0	0	124	279	69
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	5	0	0	0	0	5	0	0	0	0	0	0
SOM	1051	0	10	49	133	2	487	0	1	8	46	51
SUD	350	0	0	3	24	88	117	0	0	0	9	25
SYR	670	0	0	8	17	0	333	0		10	19	15
TUN	1	0	0	0	0	0	8	0	0	0	2	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	1558	0	0	0	0	1558	261	0	0	0	0	262
EMR	10756	7	10	360	1471	1708	4338	1	1	183	481	533

Table 4 (B): Most recent wild contacts in EMRO, 2018 - 2019

Year	Country	Data	
		Count of wild contacts	Date of Most Recent stool collection
2019	Afghanistan	1	6-Mar-19
2018 Total		1	6-Mar-19
2018	Afghanistan	4	7-Aug-18
	Pakistan	3	12-Oct-18
2018 Total		7	12-Oct-18

Table 4 (C): Number and distribution by district of -ve index AFP cases identified as wild positive by contact in EMR, 2018-2019

YEAR	COUNTRY	PROVINCE	DISTRICT	COUNT	First case	Last case
2019	AFG	HILMAND	SANGIN	1	6-Mar-19	6-Mar-19
	2019 Total				1	6-Mar-19
2018	AFG	NANGARHAR	PACHIERAGAM	1	17-Jul-18	17-Jul-18
		URUZGAN	SHAHID-E-HASSA	1	8-Jul-18	8-Jul-18
	PAK	FATA	BAJOUR	1	1-Sep-18	1-Sep-18
		BALUCHISTAN	DUKKI	1	15-Apr-18	15-Apr-18
2018 Total				4	15-Apr-18	01-Sep-18

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Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (23/2019) / Ending on : (09/06/2019)

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		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+/NPEV			received < / = 14 days	received > 14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin										VDPV
Afghanistan	RRL Pakistan	1530	116	11	188	1112	90	13	7	81						88						12%	100%	100%	99%	09/06/2019
Bahrain	NPL Oman / CDC																									10/06/2019
Djibouti	NPL Kenya / CDC																									10/04/2019
Egypt***	RRL Egypt	516	27		33	406	12	38		13						17		2	1		7%	97%	100%	99%	09/06/2019	
Iran	NPL Iran / CDC	422	7		6	394	14	1		2						5					2%	100%	100%	98%	08/06/2019	
Iraq	RRL Egypt	454	7		49	364	24	10		4						5					10%	100%	100%	71%	03/06/2019	
Jordan	NPL Jordan / RRL EGYPT	70			9	60	1														14%	100%			10/06/2019	
Kuwait	RRL Kuwait / RIVM	24			1	22		1													8%	87%		100%	30/05/2019	
Lebanon	NPL Jordan / RRL EGYPT	37	1		2	34									1						7%	100%	100%	0%	10/06/2019	
Libya	RRL Tunisia / RIVM	33			1	28	2	2													2%	100%	100%	100%	31/05/2019	
Morocco	NPL Morocco / RRL Tunisia	86	1		1	74	6	4							1						2%	100%	100%	96%	08/06/2019	
Oman	NPL Oman / CDC	8			2	5		1													27%	100%		100%	10/06/2019	
Pakistan	RRL Pakistan	5209	246	33	659	4070	146	56	22	154						169		3	1		11%	100%	100%	98%	09/06/2019	
Palestine & UNRWA		20			4	15		1													21%	35%		100%	09/06/2019	
Qatar	NPL Oman / CDC	1				1															0%	100%		100%	10/06/2019	
Saudi Arabia	NPL Saudi Arabia / CDC	122	4			113	2	3								4					0%	95%	100%	100%	09/06/2019	
Somalia	NPL Kenya / CDC	160	5		26	113	7	9		2			3		1						18%	17%		100%	09/06/2019	
Sudan	NPL Sudan / RRL Egypt	198	3		28	154	4	9							1						12%	78%	100%	50%	02/06/2019	
Syria	NPL Syria / RRL Egypt	170	12		7	145	6			5					9						5%	100%	100%	50%	08/06/2019	
Tunisia	RRL Tunisia	22			3	16	3														18%	100%		100%	31/05/2019	
U.A.E	NPL Oman / CDC	15			3	12															20%	100%		53%	10/06/2019	
Yemen	NPL Kenya / CDC																								01/06/2019	
Total EMR 2019		9097	429	44	1022	7138	317	148	29	261			3		301			5	2		10%	98%	100%	98%		
Total EMR 2018		20745	902	90	3513	16218		18	29	590	3		6 #	6	628	7 #		22	1	3	14%	92%	99%	97%		
* Specimens from all sources including non-AFP cases, excluding environmental samples									# 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																										

Table 6: Environmental isolate by year and type

Country	Status	2015	2016	2017	2018	2019
AFG	NEGATIVE	129	183	274	253	65
	PENDING					16
	WILD	20	2	42	83	23
AFG Total		149	185	316	336	104
EGY	NEGATIVE	495	528	522	540	208
	PENDING					23
	VDPV2	3	1			
EGY Total		498	529	522	540	231
IRN	NEGATIVE			6	54	23
	WILD					3
IRN Total				6	54	26
JOR	NEGATIVE		2	32	36	12
	PENDING					3
JOR Total			2	32	36	15
LEB	NEGATIVE		4	27	45	16
	PENDING					4
LEB Total			4	27	45	20
PAK	NEGATIVE	347	462	523	534	137
	PENDING					25
	WILD	79	59	105	139	140
	WILD & VDPV2	5	3	1		
	VDPV2	8	5	4		
PAK Total		439	529	633	673	302
SOM	NEGATIVE			34	181	19
	PENDING					8
	VDPV2			2	20	1
	VDPV3					12
SOM Total				36	213	28
SYR	NEGATIVE			4	102	61
	PENDING					11
SYR Total				4	102	72
Grand Total		1086	1249	1576	1999	798

Table 7: Environmental Wild/VDPV isolate by site

Country	COUNTRY	Status	PROVINCE	DISTRICT	Count	First date	Last date			
2018	AFG	WILD	HILMAND	LASHKARGAH	12	8-Jan	26-Dec			
				HIRAT	1	25-Jun	25-Jun			
				KABUL	3	26-Feb	26-Jun			
				KANDAHAR	42	8-Jan	26-Dec			
				KHOST	1	25-Sep	25-Sep			
				KUNAR	2	24-Apr	25-Sep			
				NANGARHAR	3	28-Jan	25-Oct			
				JALALABAD	19	27-Jan	26-Dec			
				AFG Total				83	8-Jan	26-Dec
				PAK	WILD	BALOCHISTAN	LORALAI	2	17-Mar	17-Aug
	PISHIN	1	2-Dec				2-Dec			
	QUETTA	13	13-Feb				20-Dec			
	KABDULAH	8	1-Jan				15-Dec			
	ISLAMABAD	7	10-Jan				10-Nov			
	PUNJAB	12	11-Jun				18-Dec			
	RAWALPINDI	15	10-Jan				14-Dec			
	DGKHAN	2	12-Feb				12-Sep			
	SINDH	1	9-Feb				9-Feb			
	HYDERABAD	3	12-Feb				12-Sep			
	JACOBABAD	3	7-Apr				9-Jul			
	KAMBAR	2	1-Aug				4-Sep			
	KHIBALDIA	15	15-Feb				11-Dec			
	KHIGADAP	1	13-Sep				13-Sep			
	KHIGQBAL	1	14-Dec				14-Dec			
	KHIKORANGI	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	5	19-May				25-Oct			
	KP TRIBAL DISTRICTS (KPTD)	2	26-Nov				27-Dec			
	WAZIR-S	4	31-Mar				27-Dec			
KHYBER PAKHTUNKHWA (KP)	5	5-Jan	27-Sep							
KOHAT	2	15-Oct	15-Nov							
MARDAN	2	18-Sep	18-Oct							
NOWSHERA	23	10-Jan	26-Dec							
PAK Total				139	1-Jan	27-Dec				
SOM	VDPV2	BANADIR	HAMAR WEYN	11	4-Jan	20-Sep				
			HODAN	2	22-Feb	4-Oct				
	VDPV3	BANADIR	WABERI	7	1-Mar	11-Oct				
			HAMAR WEYN	6	11-Feb	5-Apr				
SOM Total				32	4-Jan	11-Oct				
2018 Total				254	1-Jan	27-Dec				
2019	AFG	WILD	HILMAND	LASHKARGAH	3	23-Feb	25-Apr			
				NAHR-E-SARAJ	3	6-Jan	26-Jan			
				KANDAHAR	12	6-Jan	23-Mar			
				NANGARHAR	5	26-Jan	23-Mar			
	AFG Total				23	6-Jan	25-Apr			
	PAK	WILD	BALOCHISTAN	KHUZDAR	1	20-Mar	20-Mar			
				LORALAI	1	17-Mar	17-Mar			
				PISHIN	1	2-Feb	2-Feb			
				QUETTA	14	1-Jan	13-May			
				KABDULAH	8	1-Jan	19-Apr			
				ISLAMABAD	2	12-Apr	2-May			
				PUNJAB	2	3-Jan	6-Feb			
				LAHORE	23	5-Jan	18-May			
				MULTAN	3	18-Feb	8-May			
				RAWALPINDI	6	10-Jan	15-May			
				DGKHAN	1	8-Apr	8-Apr			
				SINDH	1	2-May	2-May			
				HYDERABAD	5	24-Jan	8-May			
				JACOBABAD	2	24-Jan	12-Feb			
				KAMBAR	1	7-Mar	7-Mar			
				KHIBALDIA	4	2-Jan	6-May			
				KHIGADAP	11	8-Jan	10-May			
				KHIGQBAL	4	1-Apr	14-May			
				KHIKORANGI	4	18-Feb	15-May			
				KHILANDHI	4	19-Feb	16-May			
				KHISITE	5	3-Jan	7-May			
				SUKKUR	5	23-Jan	15-May			
				KHILIAQAT	4	7-Feb	2-May			
				KHISADDAR	5	7-Jan	8-May			
				KP TRIBAL DISTRICTS (KPTD)	4	22-Jan	29-Apr			
				WAZIR-S	1	15-Jan	15-Jan			
				KHYBER PAKHTUNKHWA (KP)	4	28-Jan	29-Apr			
BANNU				3	8-Jan	9-Apr				
DIKHAN	1	27-Feb	27-Feb							
KOHAT	3	16-Mar	15-May							
MARDAN	7	11-Jan	10-May							
PESHAWAR	140	1-Jan	18-May							
PAK Total				140	1-Jan	18-May				
SOM	VDPV2	BANADIR	HODAN	1	3-Feb	3-Feb				
SOM Total				1	3-Feb	3-Feb				
IRN	WILD	S & B	IRANSHAHR	3	22-Apr	20-May				
IRN Total				3	22-Apr	20-May				
2019 Total				167	1-Jan	20-May				

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 09/06/2019

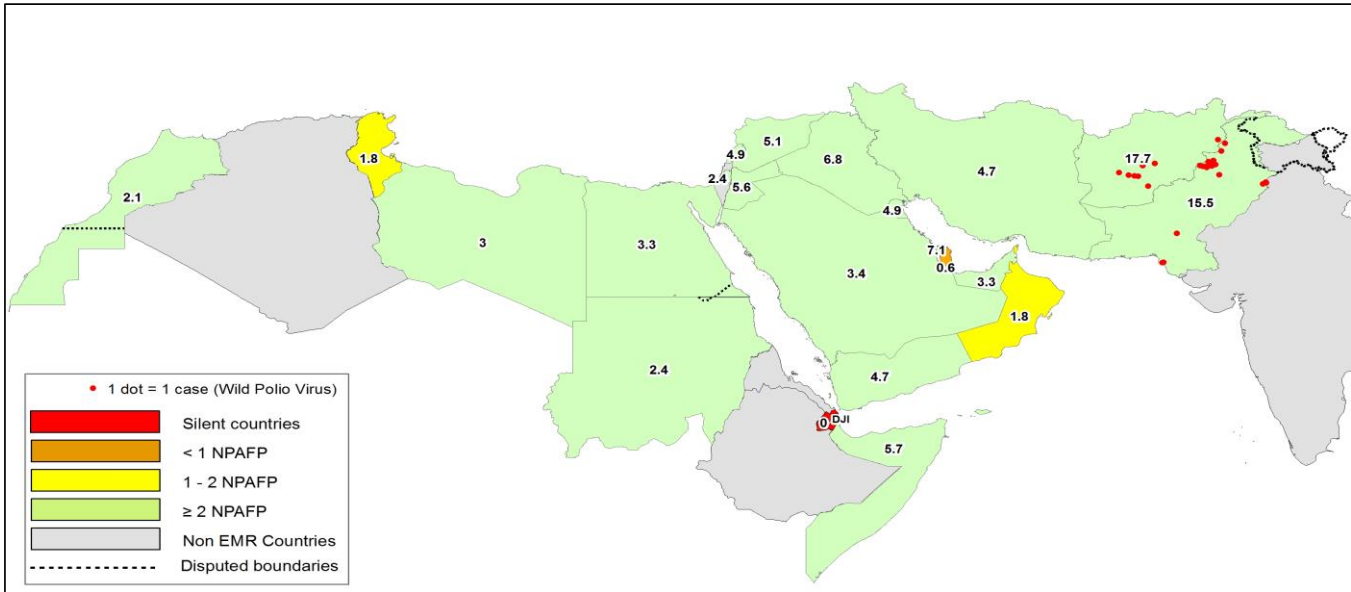


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 09/06/2019

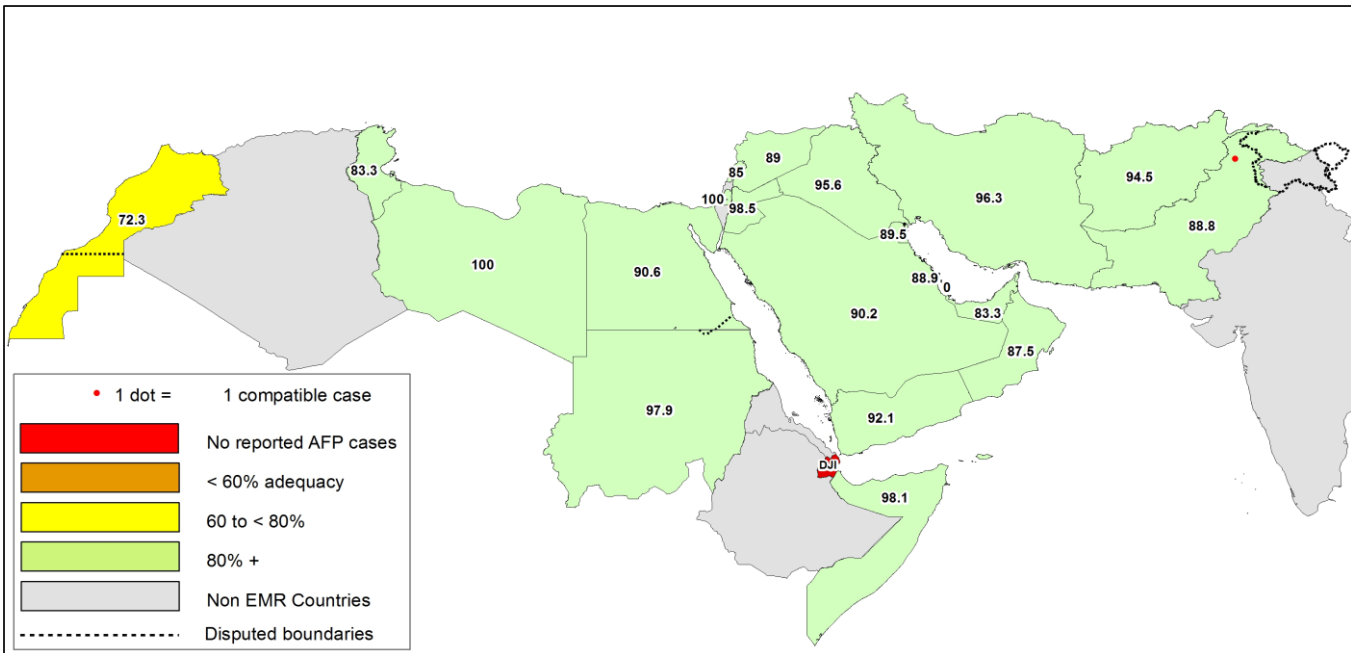


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019

Year	COUNTRY	Count	First Case	Last Case
2018	AFG	21	1-Jan-18	6-Nov-18
	PAK	12	8-Mar-18	31-Dec-18
2018 Total		33	1-Jan-18	31-Dec-18
2019	AFG	8	4-Jan-19	8-May-19
	PAK	22	15-Jan-19	19-May-19
2019 Total		30	4-Jan-19	19-May-19

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 01/01/2019 - 09/06/2019

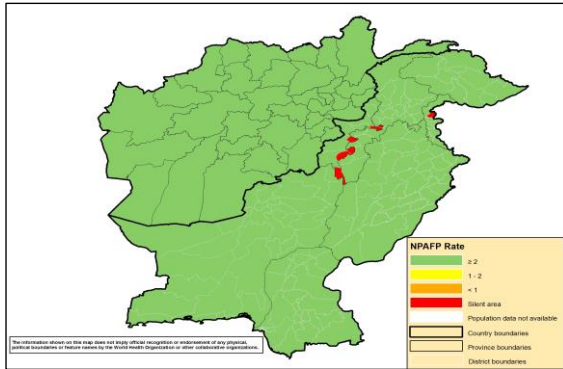


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 09/06/2019

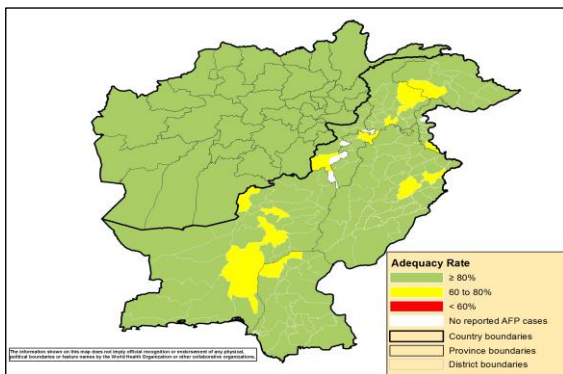
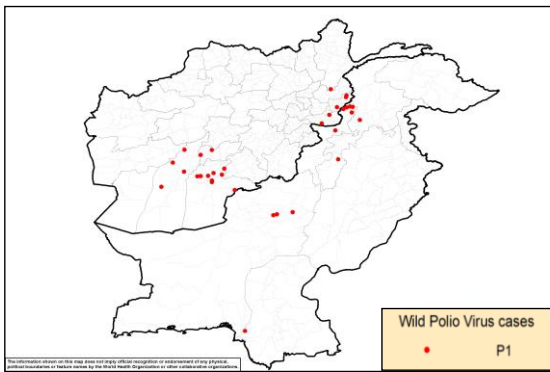
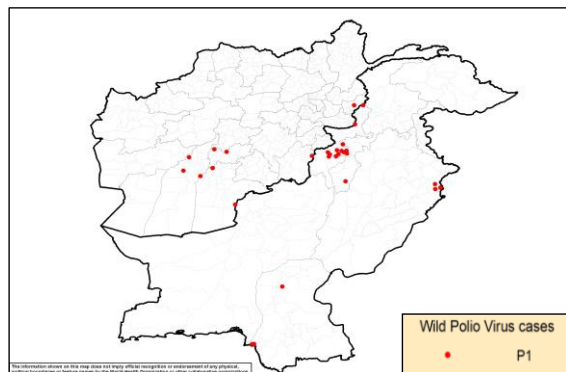


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

5(a) 01/01/2018 - 31/12/2018



5(b) 01/01/2019 - 09/06/2019



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Table 9: Wild Polio cases by district and date of onset of paralysis, Afghanistan 2018-2019

ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	HILMAND	NAWZAD	3	1-Sep-18	6-Nov-18
		NAD-E-ALI	1	1-Jun-18	1-Jun-18
	URUZGAN	SHAHID-E-HASSAS	2	8-Jul-18	9-Oct-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
	KUNAR	CHAWKAY	1	22-Jun-18	22-Jun-18
GHAZIABAD		2	14-Feb-18	3-Mar-18	
2018 Total			21	1-Jan-18	6-Nov-18
2019	KUNAR	WATAPUR	1	8-May-19	8-May-19
	HILMAND	NAWZAD	1	3-Apr-19	3-Apr-19
		WASHER	1	23-Mar-19	23-Mar-19
		SANGIN	1	6-Mar-19	6-Mar-19
	URUZGAN	CHORA	1	20-Mar-19	20-Mar-19
		SHAHID-E-HASSAS	1	25-Feb-19	25-Feb-19
	KANDAHAR	GHORAK	1	12-Jan-19	12-Jan-19
SPINBOLDAK		1	4-Jan-19	4-Jan-19	
2019 Total			8	4-Jan-19	8-May-19

Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2018-2019

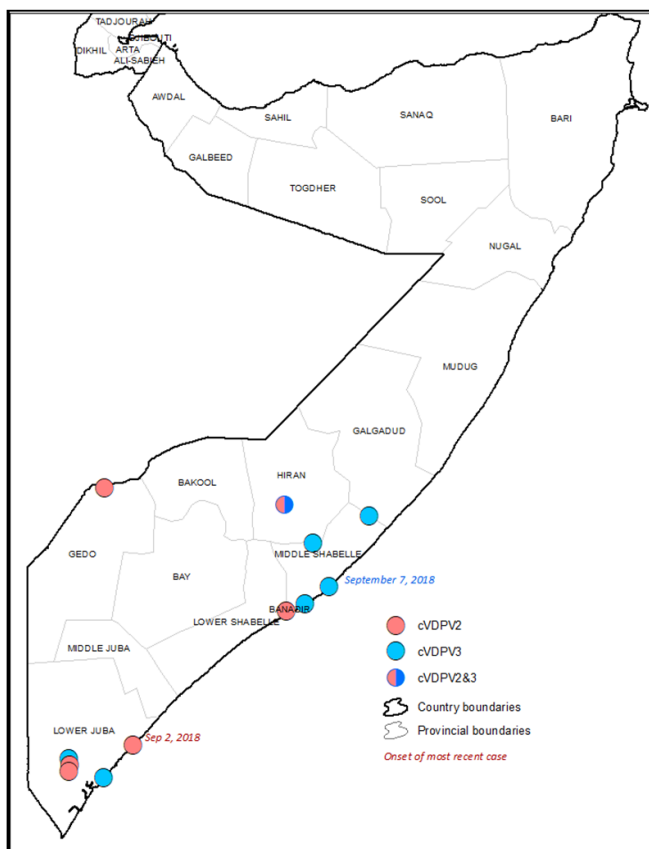
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	KP TRIBAL DISTRICT (KPTD)	BAJOUR	5	1-Sep-18	31-Dec-18
		KHYBER	1	25-Sep-18	25-Sep-18
	KHYBER PAKHTUNKHWA (KP)	LAKKIMRWT	1	16-Dec-18	16-Dec-18
		CHARSADA	1	1-Aug-18	1-Aug-18
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18
BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18	
2018 Total			12	8-Mar-18	31-Dec-18
2019	KHYBER PAKHTUNKHWA (KP)	BANNU	7	15-Jan-19	19-May-19
		DIKHAN	1	5-May-19	5-May-19
		HANGU	1	20-Jan-19	20-Jan-19
	KP TRIBAL DISTRICT (KPTD)	WAZIR-N	5	4-Apr-19	19-May-19
		KHYBER	1	14-Feb-19	14-Feb-19
		BAJOUR	1	18-Jan-19	18-Jan-19
	SINDH	KHIGIQBAL	1	29-Apr-19	29-Apr-19
		LARKANA	1	17-Apr-19	17-Apr-19
		KHILAYARI	1	25-Feb-19	25-Feb-19
	PUNJAB	LAHORE	3	20-Jan-19	17-Apr-19
2019 Total			22	15-Jan-19	19-May-19

Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2018-2019

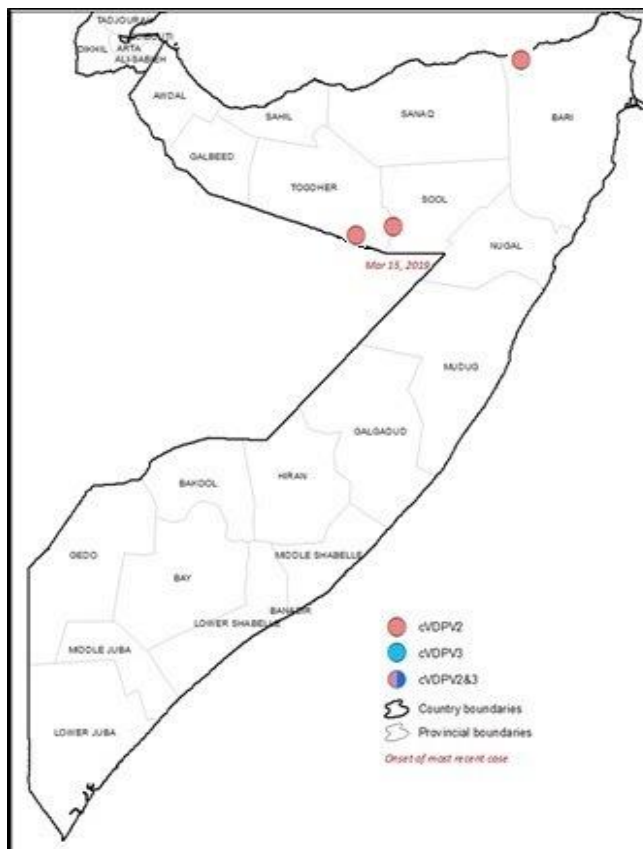
COUNTRY	YEAR	PROVINCE	DISTRICT	cVDPV2			cVDPV3			
				Count	First Case	Last Case	Count	First Case	Last Case	
SOM	2019	BARI	BOSSASO	1	08-May-19	08-May-19				
		TOGDHER	BUHODLE	1	21-Apr-19	21-Apr-19				
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19				
	Total 2019				3	15-Mar-19	8-May-19			
	2018	LOWER JUBA	JAMAAME WEST		1	02-Sep-18	02-Sep-18			
			KISMAYO		2	29-Jul-18	30-Jul-18	2	4-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD					1	07-Sep-18	07-Sep-18
			MAHADAY WARSHEIKH					1	29-Jun-18	29-Jun-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				
	Total 2018				6	11-May-18	2-Sep-18	7	11-May-18	7-Sep-18

Figure 6: Somalia cVDPV cases by type and district

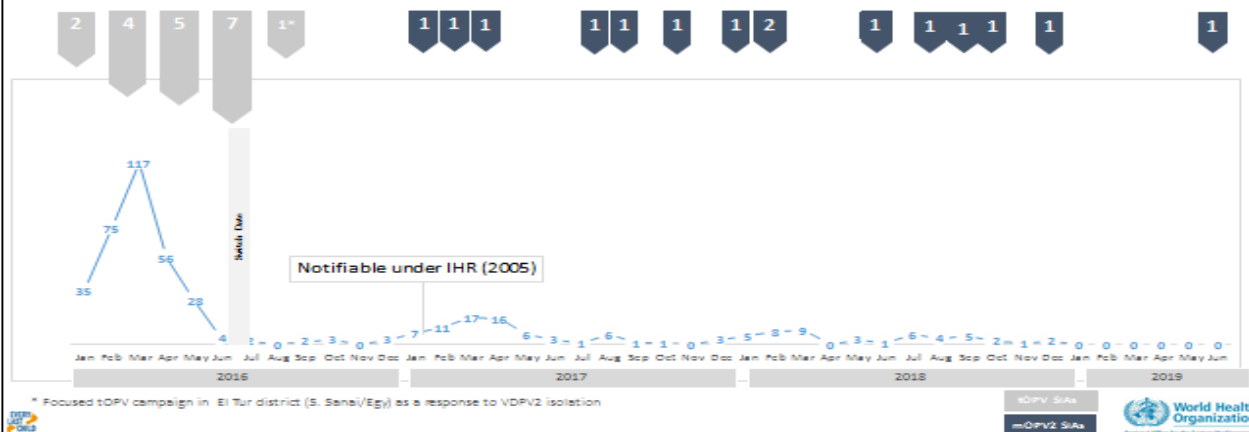
6(a) 01/01/2018 - 31/12/2018



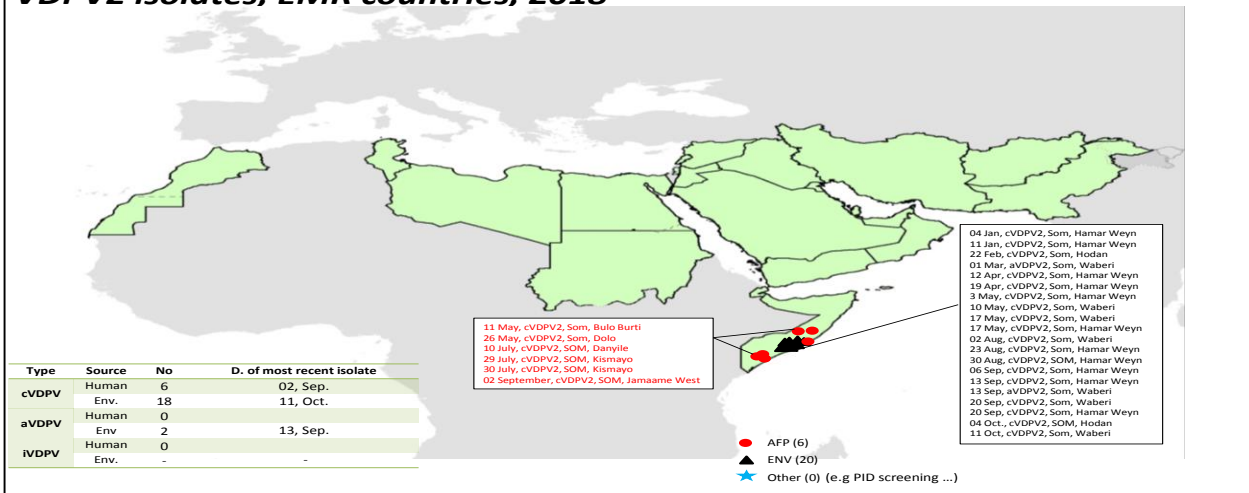
6(b) 01/01/2019 - 09/06/2019



Sabin Like Type-2 Poliovirus Isolates (H & E) EMR, 2016-19



VDPV2 isolates, EMR countries, 2018



VDPV2 isolates, EMR countries, 2019

