

Highlights of Polio Fax Bulletin No. 1076 for Week 20 2019

I. Poliovirus Transmission

1. Endemic countries (PAKISTAN & AFGHANISTAN): Two new wild poliovirus type-1 (WPV1) cases from Pakistan reported this week. Additionally, eight new WPV1 positive environmental samples including one from Afghanistan and seven from Pakistan were detected.

a. *Human samples*: Two new WPV1 cases reported this week from Pakistan. Total WPV1 cases in 2019 to date are 24 (7 from Afghanistan and 17 from Pakistan). This compares with 11 cases in 2018 in the same period (Afghanistan – 8 and Pakistan – 3).

i. Afghanistan: In 2019 to date, seven WPV1 cases are reported, all from the southern region plagued with conflict and compromised access- two each from provinces of Kandahar and Uruzgan and three from Hilmand. The most recent reported case has date of onset of paralysis on 3 April 2019.

ii. Pakistan: The Two new WPV1 cases include:

- Case No. 1: The case is a 42-month old female child from North Waziristan district, Khyber Pakhtunkhwa Tribal Districts (KPTD). She has onset of paralysis on 26 April 2019 and reportedly received 7 doses of oral polio vaccine (OPV) all from supplementary immunization activities (SIAs) and none from routine.

- Case No. 2: The case is a 6-month old male child from Karachi Gulshan-e-Iqbal town, Sindh province, with date of paralysis onset 29 April 2019. The child has not received any OPV doses

In 2019 to date, 17 WPV1 cases reported from Pakistan. They include six from KP, five from KPTD, three each from Punjab and Sindh. The most recent reported case has date of onset of paralysis on 29 April 2019.

b. *Environmental samples*: Eight new WPV1 positive environmental samples were reported this week, one from Afghanistan and seven from Pakistan.

i. Afghanistan: A new WPV1 positive environmental sample reported this week from Kandahar province (from Kandahar district). In 2019 to date, there are 22 positive environmental samples with most recent positive sample collected on 23 March 2019.

ii. Pakistan: The seven new WPV1 positive environmental samples reported this week include one from Punjab province (from Lahore district); one from Balochistan province (from Quetta district); two from Sindh province (from Karachi Baldia and Site towns); one from KPTD (from South Waziristan); one from KP province (from Bannu district) and one from Islamabad (from CDA district). In 2019 to date, there are 118 positive environmental samples with most recent positive sample collected on 7 May 2019.

II. Outbreak response countries

SOMALIA:

- No new cVDPV2 or cVDPV3 cases or isolates from human or environmental samples reported this week.

- In 2019: to date, Somalia has reported one cVDPV2 case from Las Anod district from Sool province, with date of onset 15 March 2019 noting that one of its contacts is also identified as cVDPV2.
- 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.
 - cVDPV2: cVDPV2 was isolated from 19 sewage samples in Mogadishu, the most recent sample collected on 11 October 2018.
 - cVDPV3
 - Human samples: the date of onset of the most recent cVDPV3 case is 7 September 2018.
 - Sewage samples: cVDPV3 has been isolated from 11 sewage samples in Mogadishu and date of specimen collection of the most recent is 23 August 2018.
 - Co-infection cVDPV2 and cVDPV3: The date of onset of the most recent coinfection case is 11 May 2018. In 2018, cVDPV2 and cVDPV3 were both isolated from 1 sewage sample in Mogadishu collected on 19 April 2018.

III. Other countries:

Update on Event in Islamic Republic of IRAN - WPV1 positive environmental sample reported from Konarak district, Sistan Balochistan province of Iran. The second sample from same sampling site is negative for WPV1. Samples are collected bi-monthly in Iran from environmental surveillance sites. Detailed epidemiological investigation affirms high routine immunization coverage and supplemental immunization, no missed AFP case and significant population movement with Pakistan. These findings reinforce the earlier conclusion of recent introduction and low public health impact.

IV. Surveillance performance indicators

In 2019, 19 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. Qatar has a non-polio AFP rate of 0.7 and percentage of AFP cases with adequate stool specimens of 0%

In Yemen there are AFP cases pending final classification more than 90 days due to lack of 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 (20/19) / Ending on : 19/05/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W09 03 Mar 19	W10 10 Mar 19	W11 17 Mar 19	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
Afghanistan	3094	3378	1402	81	73	68	71	75	85	66	55	74	71	56	5
Bahrain	18	35	7	0	1	0	0	1	0	1	0	0	0	1	0
Djibouti	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	1242	1246	498	40	31	31	23	43	28	25	13	19	20	26	3
Iran	820	896	362	11	15	14	7	16	25	24	25	19	14	11	0
Iraq	699	1023	414	21	17	17	15	18	26	19	25	20	11	8	
Jordan ****	116	115	65	2	4	5	4	4	6	2	3	2	1	4	
Kuwait	69	72	18	1	3	3	1	0	2	1	0	0	0	0	0
Lebanon ****	75	89	36	2	2	1	1	2	1	5	1	2	0	1	
Libya	88	122	31	1	1	1	1	1	2	1	1	1	2	1	
Morocco	143	212	83	3	10	3	2	6	4	3	5	3	5	3	2
Oman	40	28	8	1	1	0	0	0	0	1	0	1	1	1	0
Pakistan	10319	12272	4766	250	249	260	288	228	211	221	282	241	197	81	1
Palestine ****	43	44	19	1	1	2	2	0	0	1	3	0	1	0	0
Qatar	18	10	1	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	276	241	106	6	9	13	6	7	3	9	9	2	1	0	0
Somalia	345	353	138	7	8	9	14	7	12	6	7	7	8	3	0
Sudan	570	578	171	18	7	12	3	11	15	2	4	9	2	0	
Syria ****	362	362	159	11	8	6	4	16	7	7	3	5	5	4	
Tunisia	67	68	22	2	4	1	1	0	0	1	1	0	0	0	
U.A.E	58	40	17	0	1	1	1	0	0	3	0	0	0	1	0
Yemen	713	730	266	14	10	16	11	12	16	16	24	11	6	0	
Total EMR	19179	21914	8589	472	455	463	455	447	443	414	461	416	345	201	11

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	19/05		Confirmed polio cases by month of onset											
			2018	2019	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	April 2019	May 2019
Afghanistan	14	21	8	7	2	3	2	3	2	1	0	2	1	3	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	8	12	3	17	0	0	1	3	1	0	4	4	2	0	11	
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	22	33	11	24	2	3	3	6	3	1	4	6	3	3	12	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 (20/19) / Ending on : 19/05/2019

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	1402	7	0	219	1176	0	18.1	15	1	94.1	7	0	19-05-2019
Bahrain	35	0	0	2	33	0	12.1	2	0	97.1	0	0	7	0	0	4	3	0	6.3	0	0	100.0	0	0	19-05-2019
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	498	0	0	96	402	0	3.4	1	0	88.2	0	0	16-05-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	362	0	0	15	347	0	4.9	0	0	97.0	0	0	19-05-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	414	0	0	67	347	0	7.1	1	0	95.4	0	0	18-05-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	65	0	0	4	61	0	6.1	0	0	100.0	0	0	16-05-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	18	0	0	2	16	0	5.3	0	0	88.9	0	0	19-05-2019
Lebanon	89	0	0	1	88	0	4.8	1	0	96.6	0	0	36	0	0	11	25	0	5.1	4	0	86.1	0	0	17-05-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	31	0	0	5	26	0	3.2	0	0	100.0	0	0	18-05-2019
Morocco	212	0	0	1	211	0	2.4	1	0	77.8	0	0	83	0	0	47	36	0	2.4	14	6	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	2	6	0	2.1	0	0	87.5	0	0	19-05-2019
Pakistan	12272	12	1	3	12256	0	15.7	3	0	87.1	12	0	4766	17	1	595	4153	0	16.0	58	0	90.1	17	0	19-05-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	19	0	0	10	9	0	2.6	0	0	100.0	0	0	19-05-2019
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	1	0	0	1	0	0	0.7	1	0	0.0	0	0	21-04-2019
Saudi Arabia	241	0	0	0	241	0	3.0	0	0	95.9	0	0	106	0	0	82	24	0	3.4	17	0	89.6	0	0	19-05-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	138	0	0	20	117	1	5.7	0	0	97.8	0	0	19-05-2019
Sudan	578	0	0	0	578	0	3.2	0	0	97.2	0	0	171	0	0	16	155	0	2.5	1	0	98.2	0	0	12-05-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.3	0	0	159	0	0	18	141	0	5.4	0	0	89.3	0	0	18-05-2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	22	0	0	2	19	1	2.0	0	0	81.8	0	0	17-05-2019
U.A.E	40	0	0	2	38	0	3.2	2	1	97.5	0	0	17	0	0	2	15	0	3.6	0	0	88.2	0	0	19-05-2019
Yemen	730	0	0	378	352	0	5.2	378	344	91.6	0	0	266	0	0	263	3	0	5.0	113	105	90.6	0	0	12-05-2019
EMR	21914	33	1	389	21476	15	8.7	389	345	89.8	33	0	8589	24	1	1481	7081	2	9.0	225	112	91.4	24	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	472	1	0	27	78	20
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	189	0	0	6	9	28
IRN	145	0	0	3	6	0	43	0	0	0	2	0
IRQ	811	0	0	22	93	9	225	0	0	3	6	49
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	0	3	8
PAK	4209	3	0	207	882	0	1844	0	0	111	227	159
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	421	0	1	7	32	62
SUD	350	0	0	3	24	88	112	0	0	0	6	32
SYR	670	0	0	8	17	0	307	0	0	10	11	17
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	256	0	0	0	0	257
EMR	10756	7	10	360	1471	1708	3946	1	1	165	379	649

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

Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (20/2019) / Ending on : (19/05/2019)

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									
Afghanistan	RRL Pakistan	1355	108	10	158	941	140	1	6	76					80				2	12%	100%	100%	98%	18/05/2019	
Bahrain	NPL Oman / CDC																							13/05/2019	
Djibouti	NPL Kenya / CDC																							10/04/2019	
Egypt***	RRL Egypt	469	26		27	373	35	8		13					17			1	1	6%	97%	100%	99%	16/05/2019	
Iran	NPL Iran / CDC	383	7		5	340	31			2					5					1%	100%	100%	99%	18/05/2019	
Iraq	RRL Egypt	414	7		44	336	23	4		3					2					10%	100%	100%	50%	16/05/2019	
Jordan	NPL Jordan / RRL EGYPT	64			8	53	3													14%	100%			16/05/2019	
Kuwait	RRL Kuwait / RIVM	23			1	19		3												9%	85%		100%	16/05/2019	
Lebanon	NPL Jordan / RRL EGYPT	31	1		2	28								1						8%	100%	100%	0%	16/05/2019	
Libya	RRL Tunisia / RIVM	29			1	26	2													2%	100%		100%	17/05/2019	
Morocco	NPL Morocco / RRL Tunisia	65			1	60	2	2												2%	100%		97%	10/05/2019	
Oman	NPL Oman / CDC	7			2	4	1													29%	100%		100%	13/05/2019	
Pakistan	RRL Pakistan	4725	221	32	520	3547	398	10	17	146					155			3	1	4	10%	100%	100%	98%	18/05/2019
Palestine & UNRWA		19			4	13	1	1												24%	38%		100%	19/05/2019	
Qatar	NPL Oman / CDC	1				1															0%	100%		100%	13/05/2019
Saudi Arabia	NPL Saudi Arabia / CDC	115	4			97	11	3							4						0%	95%	100%	100%	19/05/2019
Somalia	NPL Kenya / CDC	138	3		18	97	7	13		2			1		1					15%	18%		100%	100%	12/05/2019
Sudan	NPL Sudan / RRL Egypt	170	2		28	127	7	6							1					14%	74%	100%	50%	13/05/2019	
Syria	NPL Syria / RRL Egypt	157	12		4	129	12			5					9					3%	100%	100%	50%	16/05/2019	
Tunisia	RRL Tunisia	19			1	15	3													10%	100%		100%	17/05/2019	
U.A.E	NPL Oman / CDC	15			3	12														20%	100%		53%	13/05/2019	
Yemen	NPL Kenya / CDC																							12/05/2019	
Total EMR 2019		8199	391	42	827	6218	676	51	23	247			1		275			4	2	6	9%	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					1
	WILD	20	2	42	83	22
AFG Total		149	185	316	336	88
EGY	NEGATIVE	495	528	522	540	184
	PENDING					19
	VDPV2	3	1			
EGY Total		498	529	522	540	203
IRN	NEGATIVE			6	54	23
	WILD					1
IRN Total				6	54	24
JOR	NEGATIVE		2	32	36	11
	PENDING					3
JOR Total			2	32	36	14
LEB	NEGATIVE		4	27	45	14
	PENDING					2
LEB Total			4	27	45	16
PAK	NEGATIVE	347	462	523	534	124
	PENDING					31
	WILD	79	59	105	139	118
	WILD & VDPV2	5	3	1		
	VDPV2	8	5	4		
PAK Total		439	529	633	673	273
SOM	NEGATIVE			34	181	15
	PENDING					8
	VDPV2			2	20	1
	VDPV3				12	
SOM Total				36	213	24
SYR	NEGATIVE			4	102	51
	PENDING					11
SYR Total				4	102	62
Grand Total		1086	1249	1576	1999	704

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
				HERAT	1	25-Jun	25-Jun
				KABUL	3	26-Feb	26-Jun
				KANDAHAR	42	8-Jan	26-Dec
				MATUN	1	25-Sep	25-Sep
				ASADABAD	2	24-Apr	25-Sep
				BEHSUD	3	28-Jan	25-Oct
				JALALABAD	19	27-Jan	26-Dec
				AFG Total	83	8-Jan	26-Dec
				PAK	WILD	BALOCHISTAN	LORALAI
	PISHIN	1	2-Dec				2-Dec
	QUETTA	13	13-Feb				20-Dec
	KABDULAH	8	1-Jan				15-Dec
	CDA	7	10-Jan				10-Nov
	LAHORE	12	11-Jun				18-Dec
	RAWALPINDI	15	10-Jan				14-Dec
	DGKHAN	2	12-Feb				12-Sep
	HYDERABAD	1	9-Feb				9-Feb
	JACOBABAD	3	12-Feb				12-Sep
	SINDH	KAMBAR	KHIBALDIA	KAMBAR	3	7-Apr	9-Jul
KHIBALDIA				2	1-Aug	4-Sep	
KHIGADAP				15	15-Feb	11-Dec	
KHIGQBAL				1	13-Sep	13-Sep	
KHIKORANGI				1	14-Dec	14-Dec	
KHILANDHI				3	10-Jan	30-Jul	
KHISITE				2	1-Jan	3-Sep	
SUKKUR				2	8-Feb	9-Nov	
KHILIAQAT				2	7-Mar	7-Nov	
KHISADDAR				1	10-Sep	10-Sep	
FATA	BAJOUR	WAZIR-S	BAJOUR	5	19-May	25-Oct	
			WAZIR-S	2	26-Nov	27-Dec	
			BANNU	4	31-Mar	27-Dec	
			KOHAT	5	5-Jan	27-Sep	
KHYBER PAKHTOONKHWA	MARDAN	NOWSHERA	MARDAN	2	15-Oct	15-Nov	
			NOWSHERA	2	18-Sep	18-Oct	
			PESHAWAR	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		
HODAN	1	1-Feb	1-Feb				
WABERI	5	8-Mar	23-Aug				
SOM Total	32	4-Jan	11-Oct				
2018 Total				254	1-Jan	27-Dec	
2019	AFG	WILD	HILMAND	LASHKARGAH	2	23-Feb	20-Mar
				NAHR-E-SARAJ	3	6-Jan	26-Jan
				KANDAHAR	12	6-Jan	23-Mar
				JALALABAD	5	26-Jan	23-Mar
				AFG Total	22	6-Jan	23-Mar
	PAK	WILD	BALOCHISTAN	KHUZDAR	1	20-Mar	20-Mar
				LORALAI	1	17-Mar	17-Mar
				PISHIN	1	2-Feb	2-Feb
				QUETTA	12	1-Jan	28-Apr
				KABDULAH	8	1-Jan	19-Apr
				CDA	2	12-Apr	2-May
				FAISALABAD	2	3-Jan	6-Feb
				LAHORE	19	5-Jan	6-May
				MULTAN	2	18-Feb	18-Apr
				RAWALPINDI	5	10-Jan	11-Apr
				DGKHAN	1	8-Apr	8-Apr
				HYDERABAD	4	24-Jan	8-Apr
				JACOBABAD	2	24-Jan	12-Feb
				KAMBAR	1	7-Mar	7-Mar
				KHIBALDIA	4	2-Jan	6-May
KHIGADAP	8	8-Jan	10-Apr				
KHIGQBAL	2	11-Apr	15-Apr				
KHIKORANGI	3	18-Feb	12-Apr				
KHILANDHI	3	19-Feb	16-Apr				
KHISITE	5	3-Jan	7-May				
SUKKUR	4	23-Jan	5-Apr				
KHILIAQAT	3	7-Feb	3-Apr				
KHISADDAR	4	7-Jan	5-Apr				
FATA	WAZIR-S	KURRAM	WAZIR-S	4	22-Jan	29-Apr	
			KURRAM	1	15-Jan	15-Jan	
			BANNU	4	28-Jan	29-Apr	
KHYBER PAKHTOONKHWA	DIKHAN	KOHAT	DIKHAN	3	8-Jan	9-Apr	
			KOHAT	1	27-Feb	27-Feb	
			MARDAN	2	16-Mar	15-Apr	
			PESHAWAR	6	11-Jan	18-Mar	
PAK Total	118	1-Jan	7-May				
SOM	VDPV2	BANADIR	HODAN	1	3-Feb	3-Feb	
SOM Total	1	3-Feb	3-Feb				
IRN	WILD	S & B	IRANSHAHR	1	22-Apr	22-Apr	
IRN Total	1	22-Apr	22-Apr				
2019 Total				142	1-Jan	7-May	

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 19/05/2019

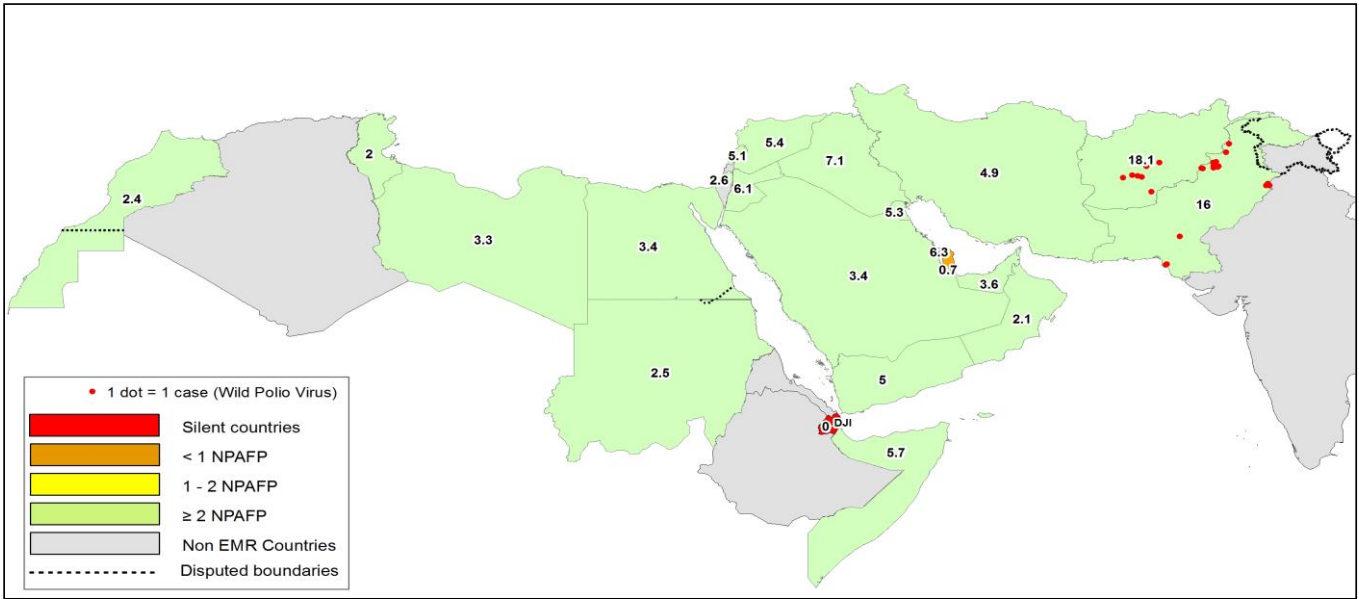


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 19/05/2019

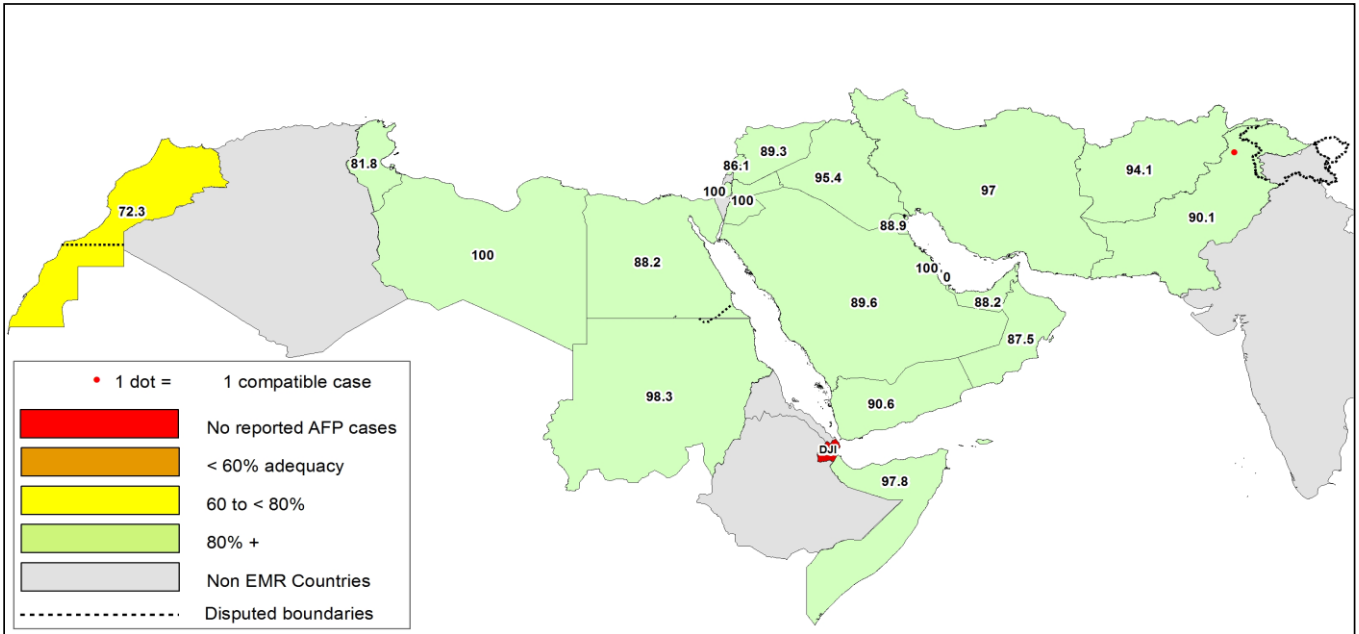


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019

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	7	4-Jan-19	3-Apr-19
	PAK	17	15-Jan-19	29-Apr-19
2019 Total		24	4-Jan-19	29-Apr-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 - 19/05/2019

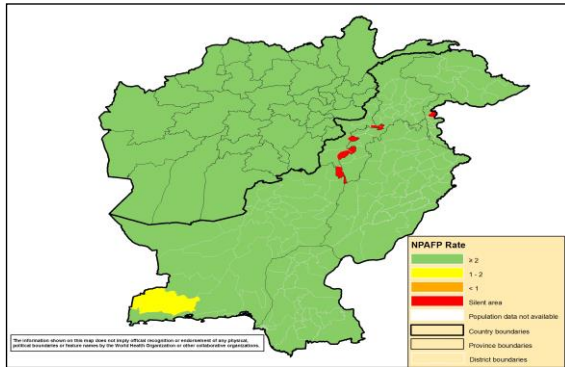


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 19/05/2019

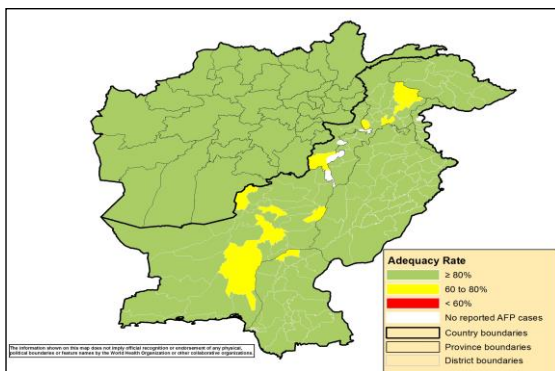
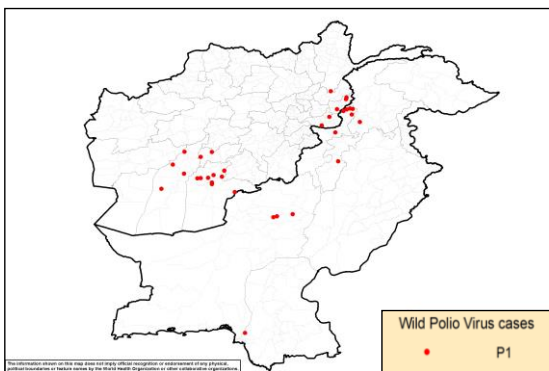
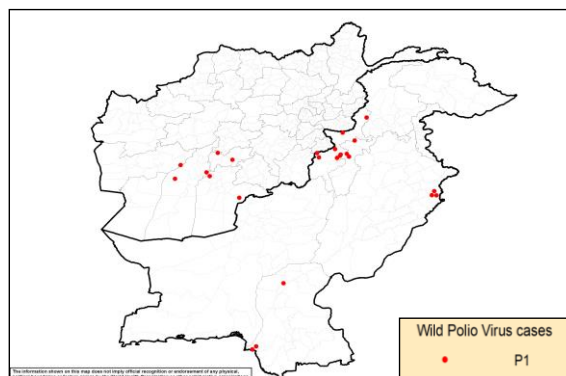


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2019 - 19/05/2019



World Health Organization – Regional Office for Eastern Mediterranean

AFP SURVEILLANCE

Week 20, ending 19 May 2019

20-May-19

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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	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			7	4-Jan-19	3-Apr-19

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

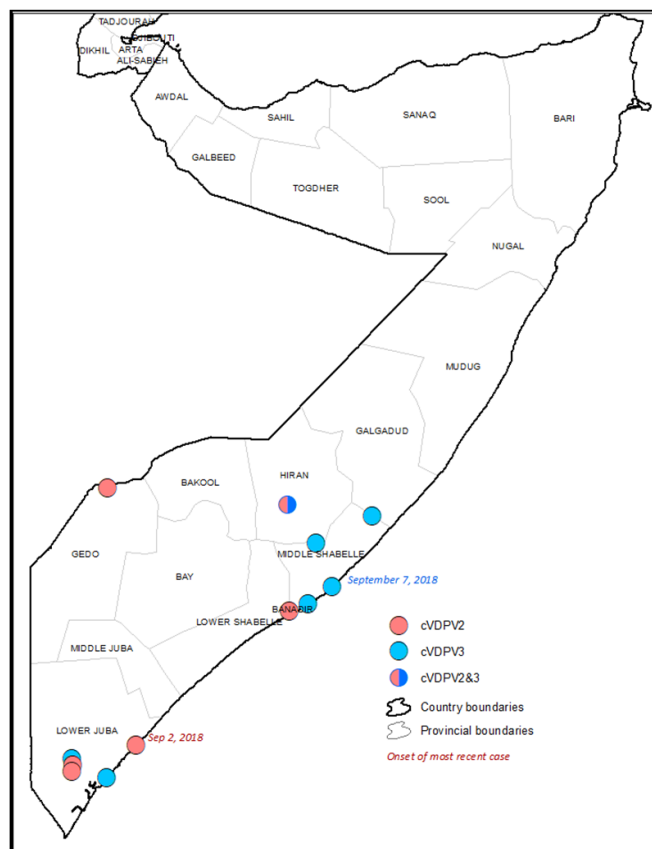
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	FATA	BAJOUR	5	1-Sep-18	31-Dec-18
		KHYBER	1	25-Sep-18	25-Sep-18
	KHYBER PAKHTOON	LAKKIMRWT	1	16-Dec-18	16-Dec-18
		CHARSADA	1	1-Aug-18	1-Aug-18
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18
	BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18
2018 Total			12	8-Mar-18	31-Dec-18
2019	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
	FATA	WAZIR-N	3	4-Apr-19	26-Apr-19
		KHYBER	1	14-Feb-19	14-Feb-19
		BAJOUR	1	18-Jan-19	18-Jan-19
	KHYBER PAKHTOON	BANNU	5	15-Jan-19	26-Apr-19
		HANGU	1	20-Jan-19	20-Jan-19
	PUNJAB	LAHORE	3	20-Jan-19	17-Apr-19
2019 Total			17	15-Jan-19	29-Apr-19

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

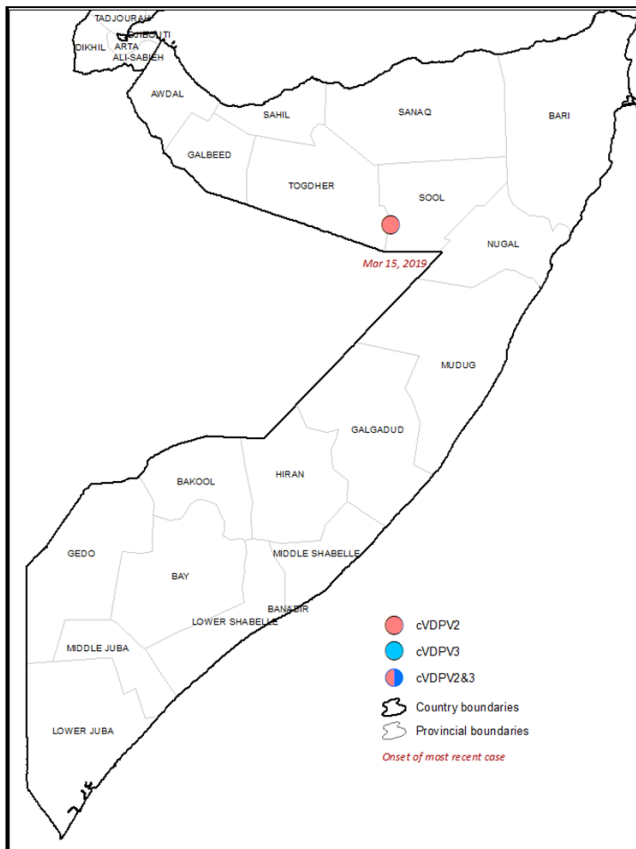
		Province	District	cVDPV2			cVDPV3		
SOM	2019	SOOL	Las Anod	1	15-Mar-19	15-Mar-19			
		Total 2019			1	15-Mar-19	15-Mar-19		
	2018	LOWER JUBA	Jamaame West KISMAYO	1	02-Sep-18	02-Sep-18			
				2	29-Jul-18	30-Jul-18	2	24-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD MAHADAY WARSHEIKH				1	07-Sep-18	07-Sep-18
							1	29-Jun-18	29-Jun-18
							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				
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

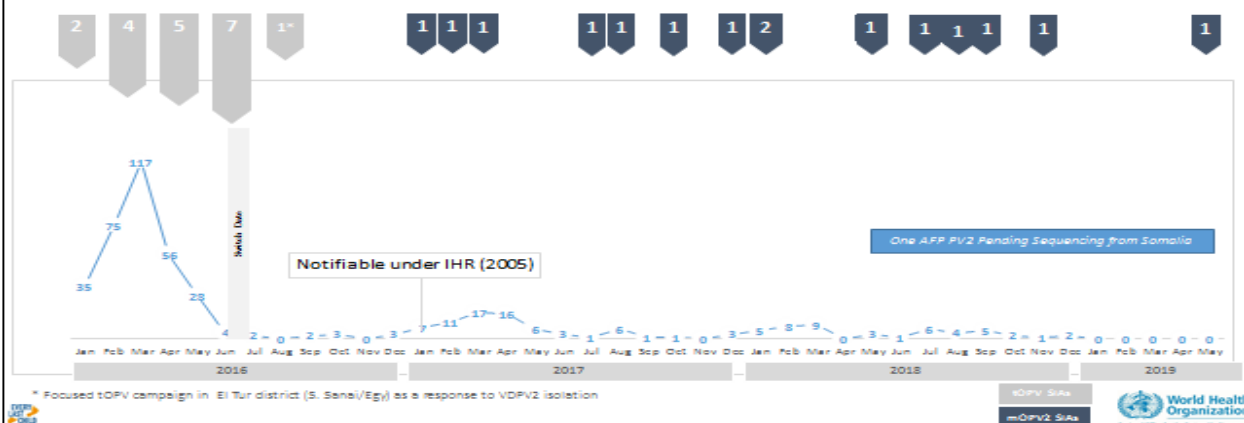
6(a) 01/01/2018 - 31/12/2018



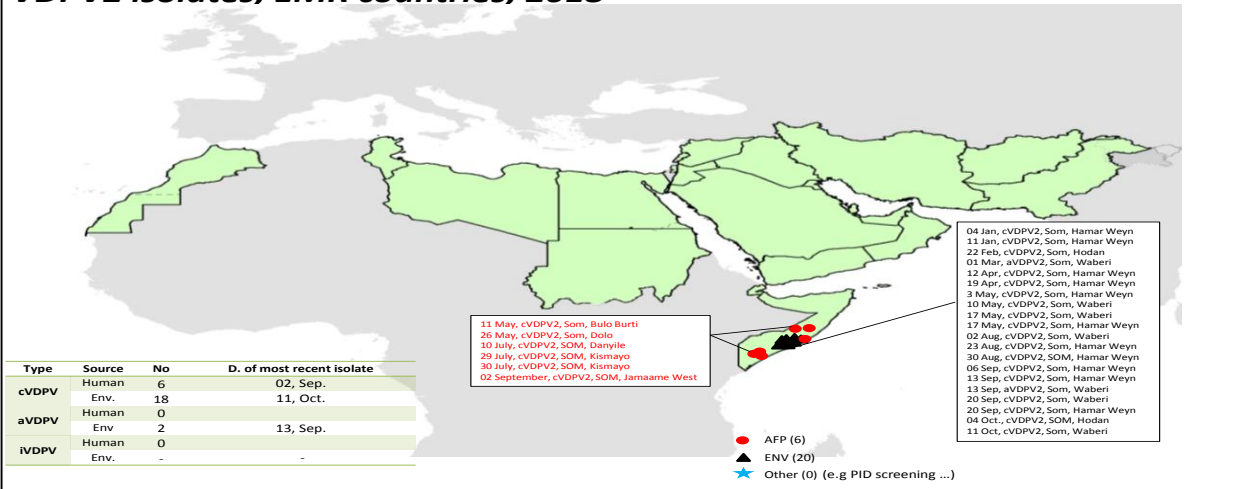
6(b) 01/01/2019 - 19/05/2019



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



VDPV2 isolates, EMR countries, 2018



VDPV2 isolates, EMR countries, 2019

