

Highlights of Polio Fax Bulletin No. 1077 for Week 21 2019

I. Poliovirus Transmission

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

a. *Human samples*: Two new WPV1 cases reported this week from Pakistan. Total WPV1 cases in 2019 to date are 26 (7 from Afghanistan and 19 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 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.
- Case No. 2: The case is a 144-month old female child from DI Khan district, Khyber Pakhtunkhwa province. She has onset of paralysis on 5 May 2019 and reportedly received 10 doses of oral polio vaccine (OPV) out of which 3 OPV doses were from routine and 7 from SIAs.

In 2019 to date, 19 WPV1 cases reported from Pakistan. They include seven from KP, six from KPTD, three each from Punjab and Sindh. The most recent reported case has date of onset of paralysis on 5 May 2019.

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

i. Afghanistan: A new WPV1 positive environmental sample reported this week from Hilmand province (from Lashkargah district). In 2019 to date, there are 23 positive environmental samples with most recent positive sample collected on 25 April 2019.

ii. Pakistan: The six new WPV1 positive environmental samples reported this week include one from Punjab province (from Multan district); and five from Sindh province (one from Hyderabad district and four from Karachi towns namely 2 from Gadap town, one each from Liaqat and Saddar towns). In 2019 to date, there are 124 positive environmental samples with most recent positive sample collected on 9 May 2019.

II. 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 reported this week.

- A new cVDPV2 case was reported this week from Somalia and it is the second case in 2019. The case was reported from Buhodle district from Togdher province, with date of onset 21 April 2019.
In 2019 to date, Somalia has reported two cVDPV2 cases. One of the cVDPV2 cases that were reported from Las Anod district from Sool has a CVDPV2 positive contact as well. The most recent reported case has date of onset of paralysis on 21 April 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.
 - 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:

Islamic Republic of IRAN: A new WPV1 positive environmental sample reported this week from Konarak district, Seestan Balochistan province of Iran. Sample collection was on 13 May 2019. This is the second positive WPV1 reported from the same site in span of 3 weeks. Response has been initiated according to the standard practices.

IV. Surveillance performance indicators

In 2019, 18 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%
- d. Tunisia has a non-polio AFP rate of 1.9

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 (21/19) / Ending on : 26/05/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	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	W21 26 May 19
Afghanistan	3094	3378	1466	73	68	71	75	85	66	55	74	72	65	51	8
Bahrain	18	35	7	1	0	0	1	0	1	0	0	0	1	0	0
Djibouti	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	1242	1246	520	31	31	23	43	28	25	13	19	20	30	20	1
Iran	820	896	384	16	14	8	16	25	24	25	19	18	17	10	
Iraq	699	1023	425	17	17	15	18	26	19	25	20	11	10	8	1
Jordan ****	116	115	67	4	5	4	4	6	2	3	2	2	4	0	1
Kuwait	69	72	18	3	3	1	0	2	1	0	0	0	0	0	0
Lebanon ****	75	89	37	2	1	1	2	1	5	1	2	1	1	0	
Libya	88	122	31	1	1	1	1	2	1	1	1	2	1	0	
Morocco	143	212	83	10	3	2	6	4	3	5	3	5	3	2	
Oman	40	28	8	1	0	0	0	0	1	0	1	1	1	0	0
Pakistan	10319	12272	4972	248	260	291	230	215	227	287	247	217	175	67	0
Palestine ****	43	44	20	1	2	2	0	0	1	3	1	1	0	0	0
Qatar	18	10	1	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	276	241	110	9	13	6	7	4	10	10	3	1	0	0	0
Somalia	345	353	147	8	9	14	7	12	6	7	7	8	4	7	1
Sudan	570	578	188	7	12	3	11	15	2	4	10	9	9	0	0
Syria ****	362	362	166	8	6	4	16	7	7	4	5	7	5	3	
Tunisia	67	68	22	4	1	1	0	0	1	1	0	0	0	0	
U.A.E	58	40	17	1	1	1	0	0	3	0	0	0	1	0	
Yemen	713	730	287	10	16	11	12	16	16	23	13	9	10	7	0
Total EMR	19179	21914	8976	455	463	459	449	448	421	467	427	384	337	175	12

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	26/05		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	19	0	0	1	3	1	0	4	4	2	0	11	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	22	33	11	26	2	3	3	6	3	1	4	6	3	3	12	2

**** 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 (21/19) / Ending on : 26/05/2019

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	1466	7	0	233	1226	0	18.0	19	1	94.4	7	0	26-05-2019
Bahrain	35	0	0	2	33	0	12.1	2	0	97.1	0	0	7	0	0	4	3	0	6.0	0	0	100.0	0	0	26-05-2019
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	520	0	0	89	431	0	3.4	0	0	88.1	0	0	23-05-2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	384	0	0	36	348	0	5.0	0	0	96.1	0	0	25-05-2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	425	0	0	71	354	0	7.0	1	0	95.5	0	0	25-05-2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	67	0	0	6	61	0	6.0	0	0	98.5	0	0	23-05-2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	18	0	0	1	17	0	5.1	0	0	88.9	0	0	26-05-2019
Lebanon	89	0	0	1	88	0	4.8	1	0	96.6	0	0	37	0	0	10	27	0	5.0	4	0	83.8	0	0	24-05-2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	31	0	0	4	27	0	3.1	0	0	100.0	0	0	25-05-2019
Morocco	212	0	0	1	211	0	2.4	1	0	77.8	0	0	83	0	0	47	36	0	2.3	17	7	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	2.0	0	0	87.5	0	0	26-05-2019
Pakistan	12272	12	1	1	12258	0	15.7	1	0	87.1	12	0	4972	19	1	554	4398	0	15.9	70	0	89.8	19	0	26-05-2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	20	0	0	9	11	0	2.6	0	0	100.0	0	0	26-05-2019
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	26-05-2019
Saudi Arabia	241	0	0	0	241	0	3.0	0	0	95.9	0	0	110	0	0	80	30	0	3.4	18	0	89.1	0	0	26-05-2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	147	0	0	21	124	2	5.8	0	0	98.0	0	0	19-05-2019
Sudan	578	0	0	0	578	0	3.2	0	0	97.2	0	0	188	0	0	21	167	0	2.6	1	0	97.9	0	0	26-05-2019
Syria	362	0	0	0	362	0	4.7	0	0	87.3	0	0	166	0	0	24	142	0	5.4	1	0	89.2	0	0	25-05-2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	22	0	0	2	19	1	1.9	0	0	81.8	0	0	24-05-2019
U.A.E	40	0	0	2	38	0	3.2	2	1	97.5	0	0	17	0	0	2	15	0	3.4	0	0	88.2	0	0	19-05-2019
Yemen	730	0	0	317	413	0	5.2	317	283	91.6	0	0	287	0	0	284	3	0	5.1	127	117	91.6	0	0	26-05-2019
EMR	21914	33	1	326	21539	15	8.7	326	284	89.8	33	0	8976	26	1	1501	7445	3	8.9	259	125	91.3	26	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	487	1	0	27	85	15
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	201	0	0	6	13	33
IRN	145	0	0	3	6	0	60	0	0	0	3	0
IRQ	811	0	0	22	93	9	240	0	0	3	6	45
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	1904	0	0	117	254	105
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	448	0	1	8	34	65
SUD	350	0	0	3	24	88	117	0	0	0	9	25
SYR	670	0	0	8	17	0	318	0	0	10	11	28
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	4113	1	1	172	423	603

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 (21/2019) / Ending on : (26/05/2019)

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	1420	114	10	164	1009	125	1	6	78						83				4	12%	100%	100%	98%	26/05/2019
Bahrain	NPL Oman / CDC																								27/05/2019
Djibouti	NPL Kenya / CDC																								10/04/2019
Egypt***	RRL Egypt	480	26		27	386	28	13		13								1	1		6%	97%	100%	99%	23/05/2019
Iran	NPL Iran / CDC	396	7		5	368	16			2											1%	100%	100%	99%	25/05/2019
Iraq	RRL Egypt	426	7		46	343	24	6		3											10%	100%	100%	50%	23/05/2019
Jordan	NPL Jordan / RRL EGYPT	66			9	56	1														14%	100%			26/05/2019
Kuwait	RRL Kuwait / RIVM	23			1	22															8%	87%		100%	26/05/2019
Lebanon	NPL Jordan / RRL EGYPT	35	1		2	28	4								1						8%	100%	100%	0%	26/05/2019
Libya	RRL Tunisia / RIVM	29			1	26	1	1													2%	100%		100%	17/05/2019
Morocco	NPL Morocco / RRL Tunisia	65			1	60		4													2%	100%		97%	10/05/2019
Oman	NPL Oman / CDC	8			2	5		1													27%	100%		100%	27/05/2019
Pakistan	RRL Pakistan	4919	235	32	578	3737	326	12	19	149						165			3	1	11%	100%	100%	98%	26/05/2019
Palestine & UNRWA		20			4	14		2													22%	38%		100%	26/05/2019
Qatar	NPL Oman / CDC	1				1															0%	100%		100%	27/05/2019
Saudi Arabia	NPL Saudi Arabia / CDC	120	4			107	6	3								4					0%	95%	100%	100%	26/05/2019
Somalia	NPL Kenya / CDC	147	4		21	101	8	13		2			2		1						17%	17%		100%	12/05/2019
Sudan	NPL Sudan / RRL Egypt	187	2		28	140	14	3							1						13%	76%	100%	50%	26/05/2019
Syria	NPL Syria / RRL Egypt	164	12		5	138	9			5					9						4%	100%	100%	50%	26/05/2019
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%	27/05/2019
Yemen	NPL Kenya / CDC																								26/05/2019
Total EMR 2019		8540	412	42	898	6568	562	62	25	252			2		288			4	2	4	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					2
	WILD	20	2	42	83	23
AFG Total		149	185	316	336	90
EGY	NEGATIVE	495	528	522	540	184
	PENDING					19
	VDPV2	3	1			
EGY Total		498	529	522	540	203
IRN	NEGATIVE			6	54	22
	PENDING					2
	WILD					2
IRN Total				6	54	26
JOR	NEGATIVE		2	32	36	11
	PENDING					4
JOR Total			2	32	36	15
LEB	NEGATIVE		4	27	45	14
	PENDING					2
LEB Total			4	27	45	16
PAK	NEGATIVE	347	462	523	534	129
	PENDING					35
	WILD	79	59	105	139	124
	WILD & VDPV2	5	3	1		
	VDPV2	8	5	4		
PAK Total		439	529	633	673	288
SOM	NEGATIVE			34	181	15
	PENDING					8
	VDPV2			2	20	1
	VDPV3					12
SOM Total			36	213	24	
SYR	NEGATIVE			4	102	53
	PENDING					12
SYR Total			4	102	65	
Grand Total		1086	1249	1576	1999	727

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	LAHORE	12	11-Jun	18-Dec
					RAWALPINDI	15	10-Jan	14-Dec
				SINDH	DGKHAN	2	12-Feb	12-Sep
					HYDERABAD	1	9-Feb	9-Feb
					JACOBABAD	3	12-Feb	12-Sep
					KAMBAR	3	7-Apr	9-Jul
					KHIBALDIA	2	1-Aug	4-Sep
					KHIGADAP	15	15-Feb	11-Dec
					KHIGIQBAL	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	5	19-May	25-Oct	
				WAZIR-S	2	26-Nov	27-Dec	
KHYBER PAKHTOONKHWA				BANNU	4	31-Mar	27-Dec	
	KOHAT	5	5-Jan	27-Sep				
	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		
			WABERI	7	1-Mar	11-Oct		
			VDPV3	BANADIR	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	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	12	1-Jan	28-Apr	
				KABDULAH	8	1-Jan	19-Apr	
				ISLAMABAD	2	12-Apr	2-May	
				PUNJAB	FAISALABAD	2	3-Jan	6-Feb
					LAHORE	19	5-Jan	6-May
				MULTAN	3	18-Feb	8-May	
				RAWALPINDI	5	10-Jan	11-Apr	
				DGKHAN	1	8-Apr	8-Apr	
				SINDH	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	10	8-Jan	9-May
					KHIGIQBAL	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				4	7-Feb	2-May		
KHISADDAR				5	7-Jan	8-May		
FATA	WAZIR-S	4	22-Jan	29-Apr				
	KURRAM	1	15-Jan	15-Jan				
KHYBER PAKHTOONKHWA	BANNU	4	28-Jan	29-Apr				
	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		124	1-Jan	9-May			
SOM	VDPV2	BANADIR	HODAN	1	3-Feb	3-Feb		
SOM Total		1	3-Feb	3-Feb				
IRN	WILD	S & B	IRANSHAHR	2	22-Apr	13-May		
IRN Total				2	22-Apr	13-May		
2019 Total				150	1-Jan	13-May		

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 26/05/2019

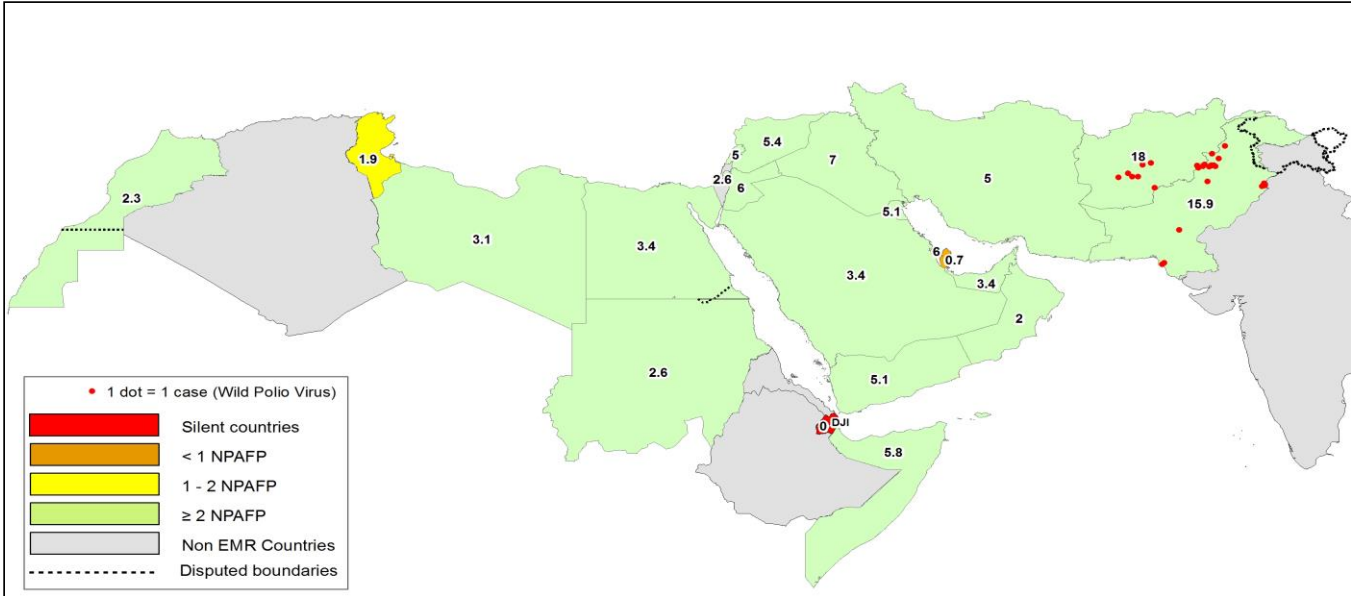


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 26/05/2019

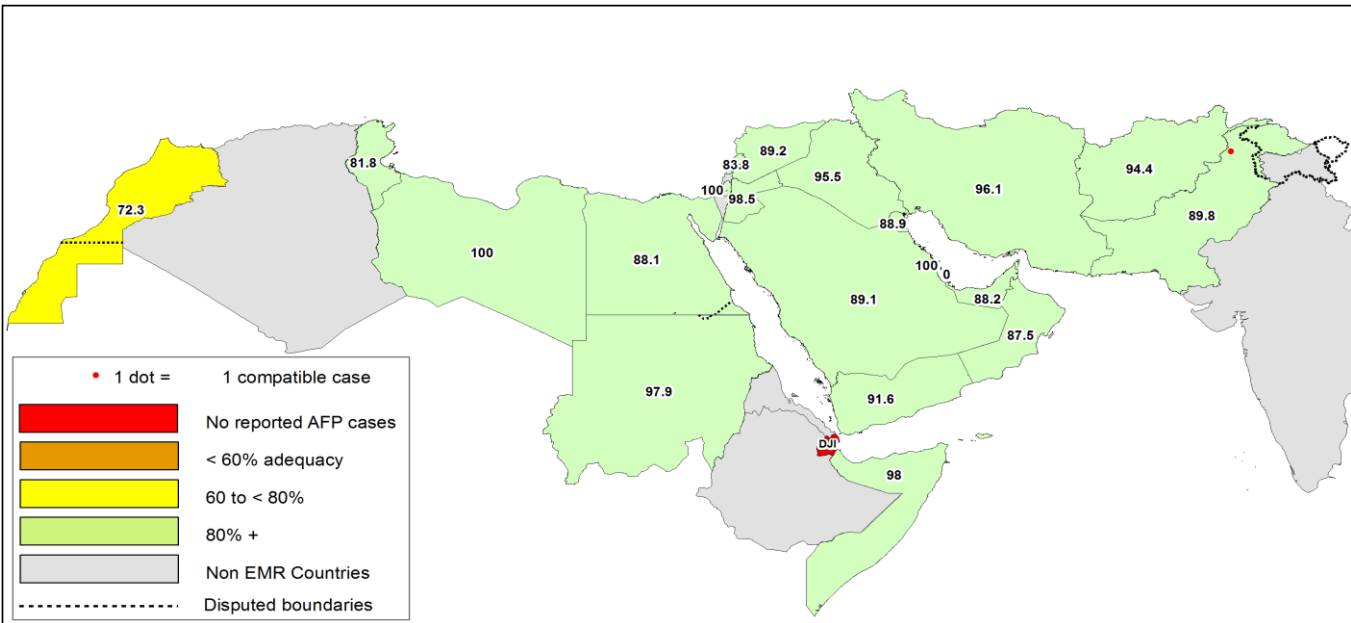


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019

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	19	15-Jan-19	5-May-19
2019 Total		26	4-Jan-19	5-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 - 26/05/2019

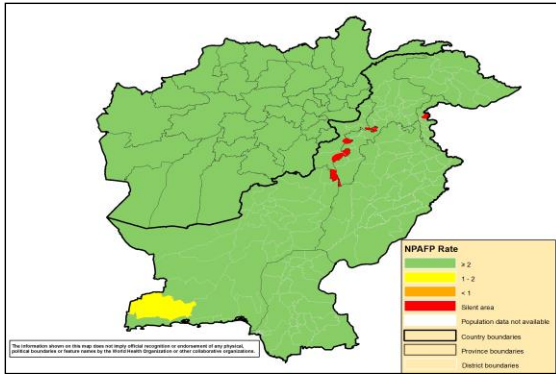


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 26/05/2019

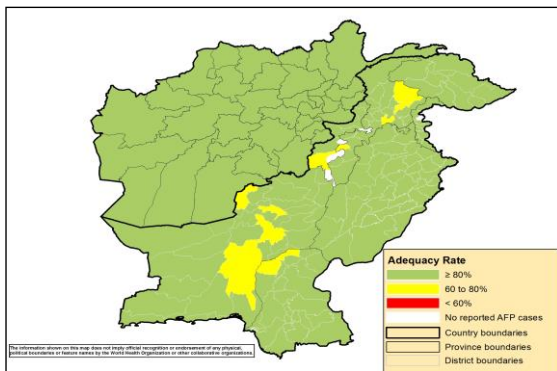
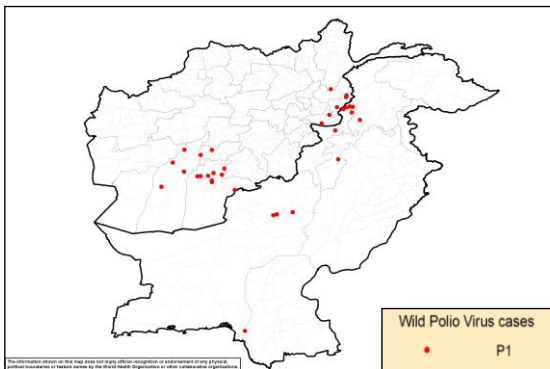
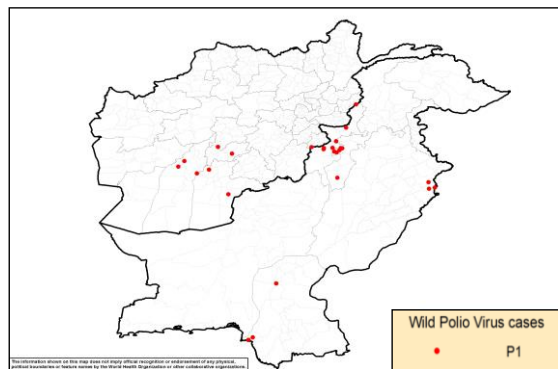


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

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



5(b) 01/01/2019 - 26/05/2019



World Health Organization – Regional Office for Eastern Mediterranean

AFP SURVEILLANCE

Week 21, ending 26 May 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	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

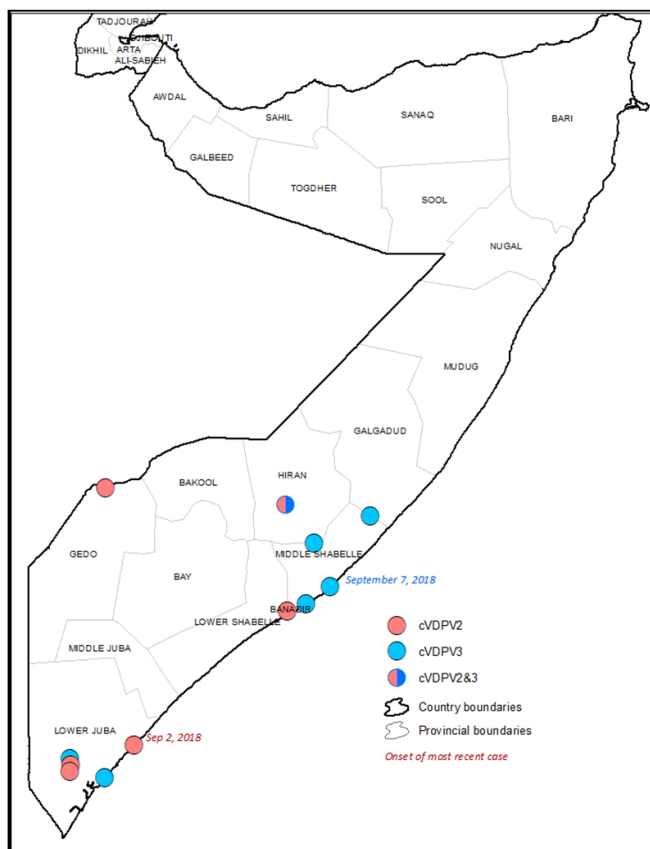
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	FATA	BAJOUR	5	1-Sep-18	31-Dec-18
		KHYBER	1	25-Sep-18	25-Sep-18
	KHYBER PAKHTOON	LAKKIMRWT	1	16-Dec-18	16-Dec-18
		CHARSADA	1	1-Aug-18	1-Aug-18
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18
BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18	
2018 Total			12	8-Mar-18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

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

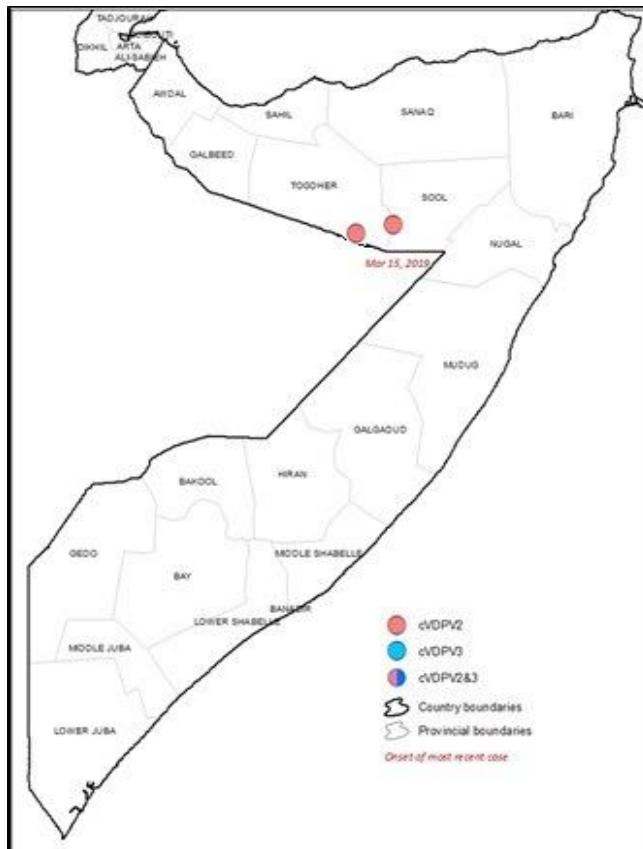
COUNTRY	YEAR	PROVINCE	DISTRICT	cVDPV2			cVDPV3		
				Count	First Case	Last Case	Count	First Case	Last Case
SOM	2019	TOGDHER	BUHODLE	1	21-Apr-19	21-Apr-19			
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19			
	Total 2019				2	15-Mar-19	21-Apr-19		
	2018	LOWER JUBA	JAMAAME WEST	1	02-Sep-18	02-Sep-18			
			KISMAYO	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

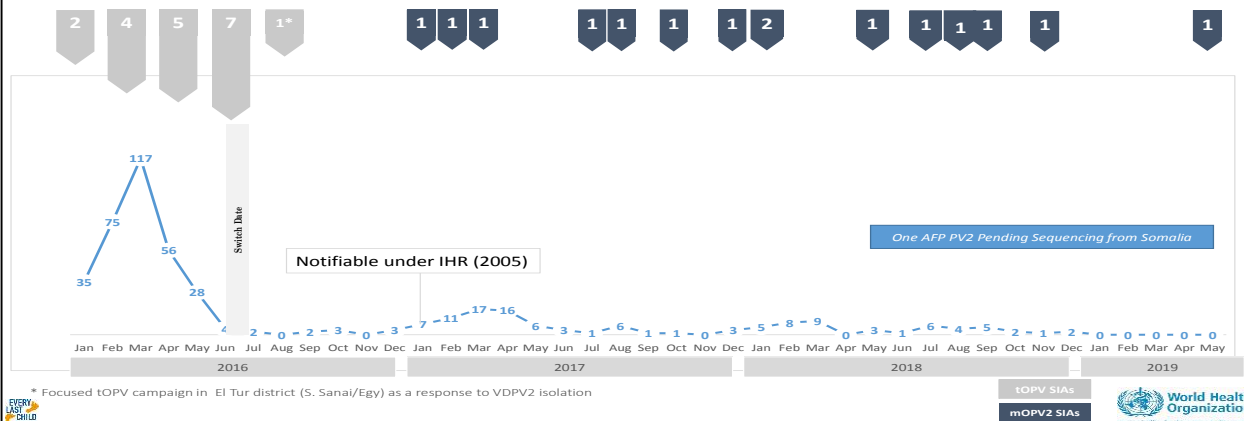
6(a) 01/01/2018 - 31/12/2018



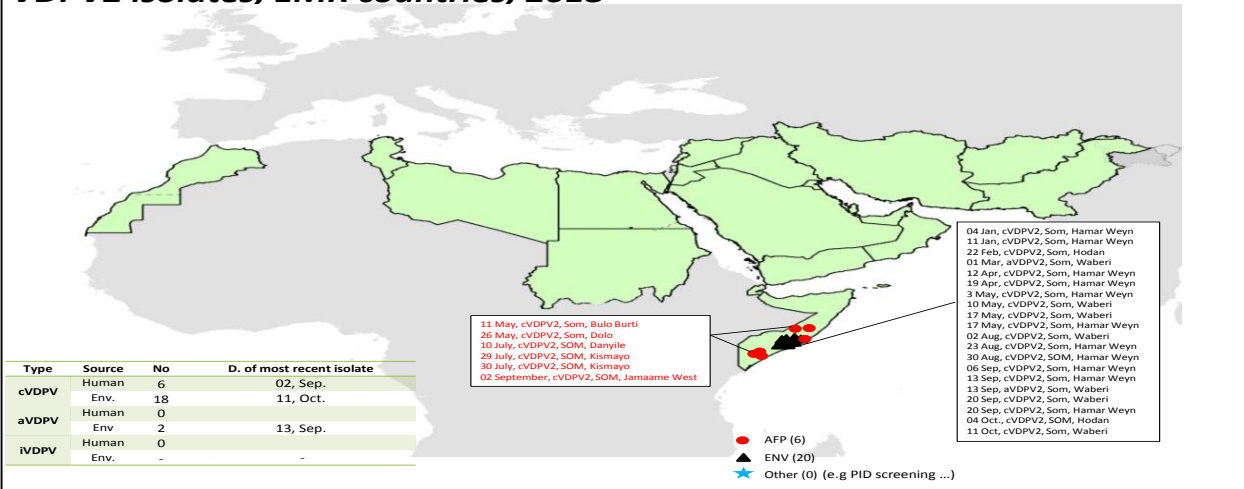
6(b) 01/01/2019 - 26/05/2019



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



VDPV2 isolates, EMR countries, 2018



VDPV2 isolates, EMR countries, 2019

